

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: TTI Inc. Examiner #: 76528 Date: 5/11/03
 Art Unit: 2713 Phone Number 30 515 Serial Number: 101627721
 Mail Box and Bldg/Room Location: _____ Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

Earliest Priority Filing Date: 1/23/2002

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

STAFF USE ONLY		Type of Search	Vendors and cost where applicable
Searcher: <u>James H. Wright</u>		NA Sequence (#)	STN _____
Searcher Phone #:		AA Sequence (#)	Dialog _____
Searcher Location:		Structure (#)	Questel/Orbit _____
Date Searcher Picked Up:		Bibliographic	Dr. Link _____
Date Completed:		Litigation	Lexis/Nexis _____
Searcher Prep & Review Time:		Fulltext	Sequence Systems _____
Clerical Prep Time:		Patent Family	WWW/Internet _____
Online Time:		Other	Other (specify) _____



STIC Search Report

EIC 3700

STIC Database Tracking Number: 100443

TO: Jeremy Thissell
Location: CP2 3E04
Art Unit: 3763

Case Serial Number: 10/057334

From: Jeanne Horrigan
Location: EIC 3700
CP2-2C08
Phone: 305-5934

jeanne.horrigan@uspto.gov

Search Notes

Attached are the search results for the method of using hypothermia in minimally invasive cardiac/aneurysm/vascular surgery, including author and prior art searches in foreign and international patent databases and prior art searches in medical and general sci-tech databases.

I did not include the results of the inventor search because they did not seem to me to be exactly about this method, but I did send you a document by email that contains the results of the inventor search, along with an electronic copy of the attached results.

Also attached to these results is a search feedback form. Completion of the form is voluntary. Your completing this form would help us improve our search services.

I hope the attached information is useful. Please feel free to contact me (phone 305-5934 or email jeanne.horrigan@uspto.gov) if you have any questions or need additional searching on this application.

Record Date Created: 19980610

Record Date Completed: 19980610

Descriptors: Aortic Diseases--surgery--SU; *Aortic Valve--surgery--SU; *Heart Arrest, Induced; *Hypothermia, Induced ...; Aged; Aged, 80 and over; Calcinosis--surgery--SU; Cerebrovascular Circulation; Constriction; Dissection; Echocardiography; Echocardiography, Transesophageal; Heart Valve Diseases--surgery--SU; Heart Valve Prosthesis Implantation; Intracranial Embolism and Thrombosis--etiology--ET; Intraoperative Complications--prevention and control--PC; Middle Age; Risk Factors; Surgical Procedures, Minimally Invasive, Time Factors

14/7,K/4

DIALOG(R) File 155: MEDLINE(R)

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11328893 98208666 PMID: 9547450

Advances in myocardial protection.

Seifert P C

Halifax Medical Center, Daytona Beach, Florida, USA.

Journal of cardiovascular nursing (UNITED STATES)

p29-38, ISSN 0889-4655 Journal Code: 8703516

Apr 1998 12 (3)

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The success of cardiac surgery is due in large part to the myocardial protection techniques employed to maintain cardiac viability during the period of induced ischemic arrest. As the number of older, high-risk cardiac surgical patients increases, advances in myocardial protection have become necessary to achieve a quiet, bloodless operative field without the production of irreversible intraoperative myocardial damage. Current efforts to provide optimal myocardial protection have focused on the effects of cardioplegic perfusate temperature, distribution of cardioplegia flow, and components of the arresting solution. Minimally invasive techniques have expanded surgical options and have led to the development of new methods to protect the myocardium. (25 Refs.)

Record Date Created: 19980526

Record Date Completed: 19980526

Descriptors: Heart Arrest, Induced--adverse effects--AE; *Hypothermia, Induced--adverse effects--AE; *Myocardial Reperfusion Injury--prevention and control--PC; Cardioplegic Solutions; Myocardial Reperfusion Injury--etiology--ET; Surgical Procedures, Minimally Invasive --methods--MT

14/7,K/5

DIALOG(R) File 155: MEDLINE(R)

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10718815 97068214 PMID: 8911542

Deep hypothermia cardiopulmonary bypass and direct surgery of two large aneurysms at the vertebro-basilar junction.

Kato Y; Sano H; Zhou J; Yamaguchi S; Kawase T; Yokoyama T; Kanno T

Department of Neurosurgery, Fujita Health University, Aichi, Japan.

Acta neurochirurgica (AUSTRIA) 1996, 138 (9) p1057-66, ISSN 0001-6268 Journal Code: 0151000

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

This paper highlights two interesting cases of radial clipping of large aneurysms at the vertebro-basilar junction accompanied by a vascular anomaly, consisting of fenestration of the split basilar artery at its origin. Description of the inner and outer surface of the aneurysm were obtained pre-operatively, from analysis by 3D CT and 3D CT endoscopy of the form of the neck, parent vessels of the vertebral arteries on both sides, basilar artery and split basilar artery, as well as other details of branching. The neck exhibited a broad base in both cases. The height of the neck extended to the internal acoustic meatus, and it was possible to expose the circumference of the aneurysmal neck, peripheral basilar artery and both vertebral arteries proximally with an anterior, transpetrosal approach. Based on the size of the aneurysm and the site being the anterior surface of the brain stem, clipping (consisting of interruption of the occluded portion and reconstruction of the parent vessels) was performed. In the first case it was achieved protecting the brain by hypothermia and barbiturates under deep hypothermia with extracorporeal circulation, and in the second case, a state of circulatory arrest was used. This paper documents the report of two cases along with other cases treated so far.

Record Date Created: 19970402

Record Date Completed: 19970402

Descriptors: Basilar Artery--surgery--SU; *Cardiopulmonary Bypass --methods--MT; * Hypothermia, Induced --methods--MT; *Intracranial Aneurysm --surgery--SU; *Vertebral Artery--surgery--SU...; PA; Brain Stem --blood supply--BS; Cerebral Angiography; Computer Simulation; Image Processing, Computer-Assisted; Intracranial Aneurysm --diagnosis--DI; Intracranial Arteriovenous Malformations--diagnosis--DI; Intracranial Arteriovenous Malformations--surgery--SU; Magnetic Resonance Imaging; Middle Age; Postoperative Complications--diagnosis--DI; Subarachnoid Hemorrhage--diagnosis--DI; Subarachnoid Hemorrhage--surgery--SU; Surgical Procedures, Minimally Invasive ; Tomography, X-Ray Computed; Vertebral Artery--pathology--PA

14/7,K/7

DIALOG(R) File 155: MEDLINE(R)

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09930416 21841769 PMID: 11852960

The effects of hypothermia on coronary artery bypass graft surgery.

Nemec L D; DiLucente M R

West Penn Allegheny Health System, Allegheny General Hospital, Pittsburgh, Pennsylvania, USA.

Critical care nursing quarterly (United States) May 2000, 23 (1) p72-80, ISSN 0887-9303 Journal Code: 8704517

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

This article will discuss how induced hypothermia affects the patient undergoing coronary artery bypass graft surgery. Nursing interventions differ greatly for cardiac procedures done on cardiopulmonary bypass versus off-bypass procedures, such as "keyhole." Induced hypothermia, cardiopulmonary bypass, cardioplegia, and various delivery techniques of cardioplegia, and postoperative hypothermia will be discussed. (27 Refs.)

Record Date Created: 20020220

Record Date Completed: 20020508

Descriptors: Coronary Artery Bypass--methods--MT; * Hypothermia,

Serial 10/057334

August 7, 2003

Annals of thoracic surgery (UNITED STATES) Jul 1998, 66 (1) p256-8,
ISSN 0003-4975 Journal Code: 15030100R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

This is a case of a patient with two saccular aneurysms in the descending aorta. Two self-expanding stents were inserted through an opening in the aortic arch, guided by the use of an Olympus endoscope, under profound hypothermia and total circulatory arrest. The bloodless field made possible the identification of the main thoracic branches, facilitating the positioning and deployment of both stents. Immediate postoperative recovery was excellent.

Record Date Created: 19980814

Record Date Completed: 19980814

Descriptors: **Angioscopy** ; ***Aortic Aneurysm** , Thoracic--therapy--TH;
***Stents**; **Aged**; **Angioscopes**; **Aorta**, Thoracic--pathology--PA; **Aortic Aneurysm** , Thoracic--pathology--PA; Equipment Design; **Heart Arrest**, Induced; **Hypothermia**, Induced ; Mesenteric Artery, Superior--pathology--PA ; Polyethylene Terephthalates; Renal Artery--pathology--PA; Steel; Suture Techniques

14/7,K/3

DIALOG(R) File 155: MEDLINE(R)

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11376245 98257214 PMID: 9594858

Aortic valve operations under deep hypothermic circulatory arrest for the porcelain aorta: "no-touch" technique.

Byrne J G; Aranki S F; Cohn L H

Division of Cardiac Surgery, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts 02115, USA.

Annals of thoracic surgery (UNITED STATES) May 1998, 65 (5) p1313-5,
ISSN 0003-4975 Journal Code: 15030100R

Comment in Ann Thorac Surg. 1998 Dec;66(6) 2158-9; Comment in PMID 9930527

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

BACKGROUND: Aortic valve replacement or repair becomes a high-risk procedure in patients in whom the ascending aorta cannot be clamped either because of extensive calcification and risk of cerebral embolus or because of extensive adhesions precluding safe dissection and clamping. METHODS: We report the results of aortic valve replacement or repair with deep hypothermic circulatory arrest in 3 patients. Techniques to improve results include routine use of epiaortic and transesophageal echocardiography, avoidance of manipulation of the ascending aorta until the circulation is arrested, avoidance of antegrade cardioplegia, routine use of retrograde cardioplegia and retrograde cerebral perfusion, when feasible, and minimal aortotomy (just enough to excise and replace or repair the valve). RESULTS: Operations were accomplished in approximately 1 hour each with minimal manipulation of the aorta, thus minimizing aortic trauma and subsequent risk of cerebral embolus. Each patient had an unremarkable recovery without neurologic complications. CONCLUSIONS: Aortic valve replacement or repair using the "no-touch" technique and deep hypothermic circulatory arrest is the preferred method when dealing with the porcelain or unclampable aorta.

Serial 10/057334

August 7, 2003

Patent Applicant/Assignee:

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(Residence), US (Nationality)

Inventor(s):

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Legal Representative:

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Suite 400, Laguna Hills, CA 92653, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200197897 A1 20011227 (WO 0197897)

Application: WO 2001US19470 20010619 (PCT/WO US0119470)

Priority Application: US 2000598852 20000620

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU
CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR
KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE
SG SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 5327

English Abstract

Devices and method for treating various incompetent anatomical valves by thermally damaging the nearby supporting tissue of the body vessel controlled by the valve with the use of electrical wires (12, 13). The device having two balloons (5, 6) and suction port (14) to draw the tissue of the vessel near the heating element (10).

22/3, AB/3 (Item 3 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00810502

METHOD FOR REDUCING MYOCARDIAL INFARCT BY APPLICATON OF INTRAVASCULAR HYPOTHERMIA

TECHNIQUE PERMETTANT DE LIMITER UN INFARCTUS DU MYOCARDE PAR APPLICATION D'UNE HYPOTHERMIE INTRAVASCULAIRE

Patent Applicant/Assignee:

RADIANT MEDICAL INC, 250 Chesapeake Drive, Redwood City, CA 94063, US, US
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Inventor(s):

DAE Michael W, 1714 Notre Dame Avenue, Belmont, CA 94002, US,

KELLER Wade A, 6183 Dunn Avenue, San Jose, CA 95123, US,

MACHOLD Timothy R, 65 Bernal Avenue, Moss Beach, CA 94038, US,

Legal Representative:

BUYAN Robert D (et al) (agent), Stout, Uxa, Buyan, & Mullins, LLP, #300,
4 Venture, Irvine, CA 92618, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200143661 A2-A3 20010621 (WO 0143661)

Application: WO 2000US42749 20001212 (PCT/WO US0042749)

Priority Application: US 99170831 19991214

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 12039

English Abstract

Methods and apparatus for preventing myocardial infarction, or lessening the size/severity of an evolving myocardial infarction, by cooling at least the affected area of the myocardium using an intravascular heat exchange catheter. The heat exchange catheter may be inserted into the vasculature (e.g., a **vein**) and advanced to a position wherein a heat exchanger on the catheter is located in or near the **heart** (e.g., within the vena cava near the patient's **heart**). Thereafter, the heat exchange catheter is used to cool the myocardium (or the entire body of the patient) to a temperature that effectively lessens the metabolic rate and/or oxygen consumption of the ischemic myocardial cells or otherwise protects the ischemic myocardium from undergoing irreversible damage or infarction.

Serial 10/057334

August 7, 2003

21/3,AB/3 (Item 3 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00875338

CRYOTREATMENT DEVICE AND METHODPROCEDE ET DISPOSITIF DE TRAITEMENT CRYOGENIQUE

Patent Applicant/Assignee:

SCIMED LIFE SYSTEMS INC, One Scimed Place, Maple Grove, MN 55311-1566, US
, US (Residence), US (Nationality)

Inventor(s):

LAFONTAINE Daniel M, 11400 5th Avenue North, Plymouth, MN 55441, US,

Patent Applicant/Inventor:

LAFONTAINE Daniel M, 11400 5th Avenue North, Plymouth, MN 55441, US, US

(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

SEAGER Glenn M (et al) (agent), Crompton, Seager & Tufte LLC, Suite 895,
331 Second Avenue South, Minneapolis, MN 55402-2246, US,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200207625 A2-A3 20020131 (WO 0207625)

Application: WO 2001US41026 20010618 (PCT/WO US0141026)

Priority Application: US 2000625163 20000725

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ
DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ
LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG
SI SK SL TJ TM TR TT TZ UA UG UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 11921

English Abstract

Devices and method for ~~rcooling~~ vessel walls to inhibit restenosis in conjunction with medical procedures such as coronary artery angioplasty. Stenosed vessel walls can be cooled prior to angioplasty, after angioplasty, or both. The invention is believed to inhibit restenosis through cooling to a temperature near freezing, preferably without causing substantial vessel wall cell death. One catheter device includes a distal tube region having coolant delivery holes radially and longitudinally distributed along the distal region. In some devices, holes spray coolant directly onto the vessel walls, with the coolant absorbed into the blood stream. In other embodiments, a balloon or envelope is interposed between the coolant and the vessel walls and the coolant returned out of the catheter through a coolant return lumen. Some direct spray devices include an occlusion device to restrict blood flow past the region being cooled. Pressure, temperature, and ultrasonic probes are included in some cooling catheters. Pressure control valves are included in some devices to regulate balloon interior pressure within acceptable limits. In applications using liquid carbon dioxide as coolant, the balloon interior pressure can be maintained above the triple point of carbon dioxide to inhibit dry ice formation. Some cooling catheters are coiled perfusion catheters supporting longer cooling periods by allowing perfusing blood flow simultaneously with vessel wall cooling. One coiled catheter is biased to assume a coiled shape when unconstrained and can be introduced into the body in a relatively

*
good for other
cases too.

--surgery--su
surgical technique; pericardiectomy; **hypothermia**; thoracotomy; follow up;
transthoracic echocardiography; human; male; female; clinical article;
adolescent; child; adult; conference paper...

SECTION HEADINGS:

009 Surgery
018 **Cardiovascular Diseases and Cardiovascular Surgery**

14/7, K/16 (Item 16 from file: 94)

DIALOG(R) File 94:JICST-EPlus

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04044262 JICST ACCESSION NUMBER: 99A0250166 FILE SEGMENT: JICST-E

Indications for and limitations of minimally invasive cardiac surgery with the lower ministernotomy approach.

KOBAYASHI JUNJIRO (1); SASAKO YOSHIKADO (1); MINATOYA KENJI (1); KITAMURA SOICHIRO (1).

(1) National Cardiovascular Center

Nippon Geka Gakkai Zasshi (Journal of Japan Surgical Society), 1998,
VOL. 99, NO. 12, PAGE. 831-836, FIG. 4, TBL. 2, REF. 20

JOURNAL NUMBER: Z0009BAN ISSN NO: 0301-4894

UNIVERSAL DECIMAL CLASSIFICATION: 616.12-089

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

ABSTRACT: The chief benefits of small skin incisions are reduced patient discomfort, accelerated recovery, and cosmetic satisfaction without compromising the quality of surgery. Since April 1997, the lower ministernotomy approach without femoral cannulation has been performed in 43 patients in the authors' institutions. The indications for this approach were initial single valve surgery and secundum-type atrial septal defect. Cases of aortic valve regurgitation that could be repaired, and aortic stenosis that necessitated annular enlargement were excluded. Among patients with mitral valve disease, those with chronic atrial fibrillation were excluded from undergoing the Maze procedure and those requiring chordal reconstruction for anterior leaflet were also excluded. Mitral valve repair for mitral regurgitation was performed in 8 patients, and open mitral commissurotomy in 2. Mitral valve replacement was performed in 3 patients and aortic valve replacement in 13. Closure of an atrial septal defect was carried out in 18 cases. An approximately 10-cm median skin incision was made, and a ministernotomy with a lower semitransverse division(inverted L-shape) was carried out.

Cardiopulmonary bypass was initiated with ascending aortic cannulation and right-angled **venous** cannulae in the superior and inferior vena cava for mitral valve disease. Single **venous** cannulae from the right atrial appendage was used for aortic valve disease. Surgery was performed with mild hypothermia and intermittent tepid blood cardioplegia with diltiazem. A rigid 30-degree angle scope held by a videoscope holder with a flexible arm was used for mitral valve surgery. There were one hospital death due to perioperative myocardial infarction and pulmonary embolism. There was one reopening for bleeding which resulted in methicillin-resistant Staphylococcus aureus mediastinitis. However, the patients was discharged after rectal muscle flap repair. (author abst.)

... DESCRIPTORS: heart valve disease...

Management of cardiopulmonary bypass during minimally invasive cardiac surgery

Bao M.; Geng J.Y.; Guo B.

Dr. M. Bao, Department of Cardiothoracic Surgery, Bethune International Peace Hospital, Shijiazhuang, Hebei 050082 China

AUTHOR EMAIL: ctsgb@public.sj.he.cn

Asian Cardiovascular and Thoracic Annals (ASIAN CARDIOVASC. THORAC. ANN.) (Singapore) 1999, 7/2 (93-95)

CODEN: ACTAF ISSN: 0218-4923

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 9

From December 1996 to December 1997, 58 patients underwent minimally invasive cardiac surgery in our institute. The operations comprised to for atrial septal defect, 26 for ventricular septal defect, 15 for mitral stenosis and insufficiency, 4 for aortic valve insufficiency, 2 for left atrial myxoma, and 1 for right ventricular myxoma. There were 21 men and 37 women with a mean age of 20 years (range, 5 to 46 years) and a mean weight of 35 kg (range, 15 to 68 kg). To establish cardiopulmonary bypass, femorofemoral and superior vena caval cannulation or femoral artery and two-stage cannulation was used. Normothermia with a beating heart or moderate hypothermia with aortic cross-clamping during cardiopulmonary bypass were employed. All patients resumed sinus rhythm spontaneously, except for one who was easily defibrillated. There were no deaths or neurologic complications and no problems with the cannulation sites. We concluded that these techniques of cardiopulmonary bypass were feasible and safe.

MEDICAL DESCRIPTORS:

*cardiopulmonary bypass; * minimally invasive surgery; * heart surgery heart atrium septum defect--surgery--su; heart ventricle septum defect --surgery--su; mitral valve stenosis--surgery--su; mitral valve regurgitation--surgery--su; aorta valve regurgitation--surgery--su; heart atrium myxoma--surgery--su; surgical technique; femorofemoral bypass; superior cava vein ; cannulation; sinus rhythm; treatment outcome; human; male; female; major clinical study; preschool child; school child...

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery

14/7,K/11 (Item 11 from file: 144)

DIALOG(R)File 144:Pascal

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13421052 PASCAL No.: 98-0114596

Minimally invasive cardiac surgical techniques in the closure of ventricular septal defect : An alternative approach. Commentary

LIN P J; CHANG C H; CHU J J; LIU H P; TSAI F C; SU W J; YANG M W; TAN P P C; HAMMON J W JR comment

Department of Cardiothoracic Surgery, The Bowman Gray School of Medicine, Wake Forest University, Medical Center Blvd, Winston-Salem, NC 27157-1096, United States; Division of Thoracic and Cardiovascular Surgery and Departments of Pediatrics and Anesthesiology, Chang Gung Memorial Hospital, Chang Gung Medical College, Taipei, Taiwan

Journal: The Annals of thoracic surgery, 1998, 65 (1) 165-170

ISSN: 0003-4975 CODEN: ATHSAK Availability: INIST-13779;

354000078265230250

No. of Refs.: 26 ref.

Document Type: P (Serial) ; A (Analytic)

Serial 10/057334

August 7, 2003

File 155: MEDLINE(R) 1966-2003/Aug W1

Set	Items	Description
S1	28047	'SURGICAL PROCEDURES //CARDIAC' OR 'SURGICAL PROCEDURES //-- CARDIOVASCULAR' OR 'SURGICAL PROCEDURES //VASCULAR' OR 'SURGI- CAL PROCEDURES, ANGIOSCOPIC'
S2	4036	'SURGICAL PROCEDURES, MINIMALLY INVASIVE'
S3	4878	'SURGICAL PROCEDURES, 'MINIMALLY INVASIVE' OR DC='E4.800.' - OR 'MINIMAL ACCESS SURGICAL PROCEDURES' OR 'MINIMAL SURGICAL - PROCEDURES' OR 'MINIMALLY INVASIVE SURGICAL PROCEDURES' OR 'A- NGIOSCOPY'
S4	380	'VIDEO-ASSISTED SURGERY'
S5	0	'SURGICAL PROCEDURES, THORACOSCOPIC'
S6	9370	'HYPOTHERMIA, INDUCED' OR DC='E3.607.' OR 'ANESTHESIA, REF- RIGERATION' OR 'CRYOANESTHESIA' OR 'HIBERNATION, ARTIFICIAL'
S7	70837	CATHETER? ?
S8	821	S1:S4 AND S6
S9	381	S1 AND S2:S3
S10	1	S6 AND S9
S11	1105195	HEART OR CORONARY OR CARDIAC OR CARDIOVASCULAR OR VASCULAR OR ANEURYSM
S12	12	S2:S3 AND S6
S13	9	S11 AND S12
S14	8	S13 NOT S10
S15	0	S14/2003
S16	1	S14 AND S7

10/7,K/1

DIALOG(R) File 155: MEDLINE(R)

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09847723 21659502 PMID: 11801895

Advances in congenital heart surgery.

Ohye R G; Bove E L

Division of Pediatric Cardiovascular Surgery, University of Michigan School of Medicine, Ann Arbor, Michigan, USA. ohye@umich.edu

Current opinion in pediatrics (United States) Oct 2001, 13 (5) p473-81, ISSN 1040-8703 Journal Code: 9000850

Document type: Journal Article; Review; Review, Tutorial

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Congenital heart surgery is a young and constantly evolving field. Since the first patent ductus arteriosus ligation by Robert Gross of Boston in 1938, a greater understanding of the anatomy and pathophysiology of congenital heart disease, improved diagnostics, and the advent of cardiopulmonary bypass and deep hypothermic circulatory arrest have allowed the open repair of many lesions. Further advances in preoperative, intraoperative, and postoperative patient management have resulted in greatly improved survivals for even the most complex congenital defects. By looking forward through continual technical innovation and back with the critical evaluation of established techniques, we continue to advance the care of the patient with congenital heart disease. (32 Refs.)

Record Date Created: 20020121

Record Date Completed: 20020206

...; surgery--SU; Heart Valve Prosthesis Implantation; Heart-Lung Transplantation; Hypoplastic Left Heart Syndrome--surgery--SU; Hypothermia, Induced ; Infant; Surgical Procedures, Minimally Invasive ;

Tissue Engineering

14/6/6

10285779 96087632 PMID: 7488774

Minimally invasive coronary artery bypass grafting: a new method using an anterior mediastinotomy.

Sep 1995

16/7,K/1

DIALOG(R) File 155: MEDLINE(R)

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10285779 96087632 PMID: 7488774

Minimally invasive coronary artery bypass grafting: a new method using an anterior mediastinotomy.

Robinson M C; Gross D R; Zeman W; Stedje-Larsen E

Department of Surgery, College of Medicine, University of Kentucky, Lexington.

Journal of cardiac surgery (UNITED STATES) Sep 1995, 10 (5) p529-36,
ISSN 0886-0440 Journal Code: 8908809

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

The benefit of internal mammary artery (IMA) grafting as a long-lasting intervention for **coronary** artery disease is well recognized. However, largely because they are less invasive, **catheter** based alternatives are frequently chosen, particularly to treat single or double vessel disease. To retain the advantages of the IMA graft, and to offset the invasiveness of conventional **coronary** artery bypass grafting, we developed a new minimally invasive method using an anterior mediastinotomy for treating left anterior descending (LAD) or right **coronary** artery disease, or both. Feasibility studies using 16 pigs and a human cadaver led to approval by the Institutional Review Board for use of this procedure to treat six patients (four men, two women; mean age, 63.8 +/- 13.6 [SD] yrs) who granted informed consent. Pedicle dissection of the IMA, using video assisted thoracoscopy if necessary, was made through a 2- to 3-inch horizontal anterior mediastinotomy. The underlying LAD artery was grafted during femoral vessel cardiopulmonary bypass, with cooling to 30 degrees C, induced ventricular fibrillation, and left ventricular venting if required. Transesophageal echocardiography performed after bypass showed that two patients maintained normal wall motion and four had improvement from the original impairment. One patient suffered a recurrence of angina 4 weeks after the procedure; recatheterization showed an acutely angled IMA, subsequently corrected by balloon angioplasty. The results of follow-up dobutamine echocardiographic stress tests were negative in all patients. With this minimally invasive approach, the procedure should provide the benefits of IMA grafting with shorter hospital stay, more rapid recovery, and less overall cost.

Record Date Created: 19960104

Record Date Completed: 19960104

Descriptors: Internal Mammary- **Coronary** Artery Anastomosis--methods--MT;
*Mediastinum--surgery--SU; * Surgical Procedures, Minimally Invasive ...;
80 and over; Angina Pectoris--etiology--ET; Angina Pectoris--therapy--TH;
Angioplasty, Balloon; Cardiopulmonary Bypass; **Coronary** Disease--surgery
--SU; **Coronary** Disease--ultrasonography--US; Echocardiography;
Echocardiography, Transesophageal; Exercise Test; Feasibility Studies;

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Follow-Up Studies; Heart Catheterization; Hypothermia, Induced
Internal Mammary- Coronary Artery Anastomosis--adverse effects--AE; Middle
Age; Recurrence; Swine; Thoracoscopy; Ventricular Fibrillation; Ventricular
Function, Left...

14/7,K/1

DIALOG(R) File 155: MEDLINE(R)

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11665317 99100294 PMID: 9884556

Chronic pulmonary thromboendarterectomy complicated by antithrombin III deficiency and antiphospholipid syndrome.

Ando M; Okita Y; Matsukawa R; Kitamura S

Department of Cardiovascular Surgery, National Cardiovascular Center,
Osaka, Japan.

Japanese journal of thoracic and cardiovascular surgery - official publication of the Japanese Association for Thoracic Surgery = Nihon Kyobu Geka Gakkai zasshi (JAPAN) Nov 1998, 46 (11) p1082-7, ISSN 1344-4964
Journal Code: 100884261

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Pulmonary thromboendarterectomy was performed on two patients with chronic pulmonary thromboembolism showing thrombotic tendency. Patient 1 was a 25-year-old male with the disease complicated by congenital antithrombin III deficiency. Patient 2 was a 21-year-old male with the disease complicated by antiphospholipid syndrome. Both patients were admitted to the center upon showing dyspnea. Lung perfusion scintigraphy revealed multiple defects in the right and left lungs. Pulmonary arteriography showed occlusion and stenosis from lobar to segmental arteries. Cardiac catheterization showed marked pulmonary hypertension. Pulmonary angiography confirmed the presence of organized thrombi while an intravascular ultrasound revealed a thickening of the pulmonary arterial walls in both lungs. After the insertion of an inferior vena cava filter in each patient, surgery was performed. Following a median sternotomy, a cardiopulmonary bypass was utilized to induce deep hypothermia at a pharyngeal temperature of 16 degrees C, after which a thromboendarterectomy of the bilateral pulmonary arteries was performed under intermittent circulatory arrest. A large amount of organized thrombi was extracted from these arteries. After surgery, both patients showed good postoperative outcome with improved blood flow in both lungs, reduced pulmonary arterial pressure and increased cardiac output.

Record Date Created: 19990407

Record Date Completed: 19990407

; Adult; Chronic Disease; Heart Arrest, Induced; Hypothermia, Induced
; Pulmonary Embolism--etiology--ET; Treatment Outcome

14/7,K/2

DIALOG(R) File 155: MEDLINE(R)

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11471497 98355208 PMID: 9692480

Endoscopic placement of stents in aneurysms of the descending thoracic aorta.

Palma J H; Carvalho A C; Buffolo E; Almeida D R; Gomes W J; Brasil L A
Division of Cardiovascular Surgery, Escola Paulista de Medicina, Sao Paulo, SP, Brazil. jhpalma.dcir@epm.br

Fitzgerald, Carmel A.
Critical Care Nursing Quarterly, v21, n1, p41(7)
May, 1998

PUBLICATION FORMAT: Magazine/Journal ISSN: 0887-9303 LANGUAGE: English
RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional
WORD COUNT: 3443 LINE COUNT: 00301

ABSTRACT: Minimally invasive cardiac valve surgery allows for effective heart valve repair with the potential for a smaller incision and shorter hospital stay than surgery through a full sternotomy. Using specially designed instruments and a thoroscope, this procedure utilizes small sternal or parasternal incisions for access, and femoral cannulation for cardiopulmonary bypass. Surgery through a port results in a smaller surgical wound, potentially less blood loss, and a more rapid recovery. Mitral and aortic valves can be replaced or repaired with a minimally invasive approach.

TEXT:

With the recent advancement and experience in minimally invasive coronary artery bypass surgery in selected patients, minimally invasive valve surgery using similar techniques is promising. Coupled with the movement in cardiac surgery to decrease costs, hospital lengths of stay and recovery time, minimally invasive techniques for...

...a ministernotomy and a parasternal incision are described. Key words: aortic valve, endoscopic, Heartport Inc, minimally invasive cardiac surgery , ministernotomy, minithoracotomy, mitral valve, Parasternal, port-access, video-assisted cardiac surgery

... and increased use of intraoperative transesophageal echocardiography (TEE) have all contributed to the advancement of cardiac valve surgery. With the recent experience in minimally invasive coronary artery bypass surgery in selected patients,(1-7) minimally invasive cardiac valve surgery using similar techniques is promising. Coupled with the movement in cardiac surgery to decrease costs, hospital lengths of stay, and recovery time, minimally invasive techniques for...
...right parasternal incision are described. The advantages and disadvantages of such techniques are also described.

MINIMALLY INVASIVE MITRAL VALVE SURGERY

When cardiopulmonary bypass was first introduced for cardiac surgery, the diseased mitral valve was approached via a right thoracotomy.(8) Currently, standard mitral...

...Anesthesia for patients undergoing portaccess mitral valve replacement/repair uses the same principles as any minimally invasive cardiac surgery : It focuses on early extubation but, as with conventional cardiac surgery, should afford analgesia and amnesia. Opioid-based anesthetic agents can be minimized with an...

...passed into the pulmonary artery to decompress the heart during CPB. The coronary sinus cardioplegia catheter is positioned in the coronary sinus to occlude the coronary sinus and deliver the cardioplegia solution for cooling and arrest of the heart . The femoral artery and vein are exposed via surgical cutdown and the patient is heparinized. The venous cannula is inserted...right atrium and ascending aorta for CPB. With the recent enthusiasm for the use of minimally invasive techniques in cardiac surgery , some experienced cardiothoracic surgeons are using alternative methods for aortic valve replacement or repair. One...retracted as with a median sternotomy. In comparison to a median sternotomy similar to other minimally invasive cardiac surgeries , the potential for mediastinitis is drastically reduced. Patients are extubated earlier and have a shorter...

...disease or morbid obesity. (28)

New issues have arisen along with the new approaches to **minimally invasive cardiac valve surgery**. It is generally agreed that a smaller incision has advantages over a median sternotomy. There...

...Cardiac Surg. 1995;10:620-625.

(2.) Subramanian VA, Sani G, Benetti FJ, Calafiore AM. **Minimally invasive coronary bypass surgery**: a multicenter report of preliminary clinical experience. Circulation. 1995;92S: 1645.

(3.) Acuff TE, Landreneau...

...83:1342-1344.

(16.) Gayes JM, Emery RW, Nissen MD. Anesthetic considerations for patients undergoing **minimally invasive coronary artery bypass surgery**: mini-sternotomy and mini-thoracotomy approaches. J Cardiothorac Vasc Anes. 1996;10(4):531-535...

16/3,AB,K/2 (Item 2 from file: 149)

DIALOG(R) File 149:TGG Health&Wellness DB(SM)

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01745149 SUPPLIER NUMBER: 20202611 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Minimally invasive valve surgery. (Advances in Cardiovascular Interventions)

Brown, Katherine Kay

Critical Care Nursing Quarterly, v20, n4, p40(13)

Feb, 1998

PUBLICATION FORMAT: Magazine/Journal ISSN: 0887-9303 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional

WORD COUNT: 6212 LINE COUNT: 00555

ABSTRACT: Minimally invasive mitral valve surgery, less costly than the conventional procedure, has been developed. Technologic advances make this new procedure possible. It causes less pain and gives quicker healing and faster recovery. Heartport, Inc. (Redwood City, CA) makes the port-access mitral valve replacement system, which has four major components including a port-access-compatible St. Jude prosthetic valve. The system, which uses a port-access approach to mitral valve repair or replacement, is used at Allegheny General Hospital (Pittsburgh, PA), where implications are being studied.

... the right atrium with the tip in the coronary sinus and the pulmonary artery vent **catheter** in the pulmonary artery. The coronary sinus cardioplegia **catheter** occludes the coronary sinus while its lumen delivers cardioplegia solution to maintain **cardiac arrest** and myocardial **cooling**. The pulmonary artery vent **catheter** decompresses the heart during cardiopulmonary bypass. The patient's chest and groin are prepped and draped for the...

16/3,AB,K/3 (Item 3 from file: 149)

DIALOG(R) File 149:TGG Health&Wellness DB(SM)

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01745148 SUPPLIER NUMBER: 20202610 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Minimally invasive cardiac surgery : surgical techniques and nursing considerations. (includes nursing care plan for the postoperative patient) (Advances in Cardiovascular Interventions)

Daniel, Jan; Dattolo, Julia

Critical Care Nursing Quarterly, v20, n4, p29(9)

Feb, 1998

PUBLICATION FORMAT: Magazine/Journal ISSN: 0887-9303 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract TARGET AUDIENCE: Professional

WORD COUNT: 4312 LINE COUNT: 00393

ABSTRACT: There are changes in staffing requirements, bed allocations and staff training related to the minimally invasive direct coronary artery bypass graft (MIDCAB). The procedure uses a small anterior thoracic incision, and, occasionally, the aid of the thoracoscope. With it there is a decrease in the length of hospital stay, fewer postoperative complications, and more rapid recovery.

TEXT:

...requirements, bed allocations, and staff training. Advantages and limitations are discussed. Key words: cardiopulmonary bypass, **coronary artery** bypass grafting (CABG), direct **coronary surgery**, minimally invasive **cardiac surgery**, minimally invasive direct **coronary artery** bypass graft (MIDCAB)

... and severity Midsternal, 2-5 in

Thoracic, 2-5

Cardiopulmonary bypass	No
Graft vessel	Same
Hypothermia utilization	No
Cardiac standstill	No
Postoperative drainage needs	Single anterior or lateral chest drain

CABG = **coronary artery** bypass grafting; MIDCAB = minimally invasive direct coronary artery bypass graft.

ADVANTAGES

Catheter-based procedures such as arthrectomy, balloon angioplasty, and stenting may initially be used to promote...requirements, and concomitant patient services will be affected and need to be examined.

In summary, **minimally invasive surgical** techniques can be used. for bypassing diseased **coronary arteries** without a medial sternotomy or cardiopulmonary bypass. With further experience, this less invasive surgical technique...

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File 350:Derwent WPIX 1963-2003/UD,UM &UP=200350

File 347:JAPIO Oct 1976-2003/Apr(Updated 030804)

File 371:French Patents 1961-2002/BOPI 200209

Set Items Description

S1 958103 HYPOTHERMI? OR COOL??? OR CRYOANESTHESIA

S2 504 MINIMALLY() INVASIVE(3N) (SURGERY OR SURGERIES OR SURGICAL)

S3 63378 CORONARY OR CARDIAC OR CARDIOVASCULAR OR HEART

S4 28730 VASCULAR OR ANEURYSM? OR VEIN? ? OR VENOUS

S5 23972 ARTERY OR ARTERIES OR ARTERIAL OR ARTERIO?

S6 26583 CATHETER?

S7 146 S2 AND S3:S5

S8 5 S1 AND S7

S9 4330 IC=A61F-007/12 OR IC=A61F-007/00

S10 57715 IC=A61B-017

S11 15746 IC=A61M-025

S12 3003 IC=A61M-039

S13 3002 IC=A61M-001/36

S14 5 S1 AND S2(S)S3:S5

S15 0 S14 NOT S8

S16 3 S2 AND S3:S5 AND S9

S17 1 S16 NOT S8

8/26, TI/4 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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013342962

WPI Acc No: 2000-514901/200046

Intravascular catheter for creating an extra vascular opening in the vessel wall has anchoring mechanism on distal end of the intravascular navigation shaft made as inflatable balloon, and tissue penetrating member

8/26, TI/5 (Item 5 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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012496545

WPI Acc No: 1999-302653/199925

Manipulator for displacing organ, e.g. heart, during surgery including minimally invasive surgery

8/7, K/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

(c) 2003 Thomson Derwent. All rts. reserv.

014860919 **Image available**

WPI Acc No: 2002-681625/200273

Catheter for cardiac valve treatment, has disposable shaft for insertion into body vessel, through which drivable mechanism is connected to tool

Patent Assignee: BROCK D L (BROC-I); LEE W (LEEW-I); ROGERS G (ROGE-I); WEITZNER B (WEIT-I)

Inventor: BROCK D L; LEE W; ROGERS G; WEITZNER B

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20020087148	A1	20020704	US 9828550	A	19980224	200273 B
			US 99133407	P	19990510	
			US 99375666	A	19990817	
			US 2000195264	P	20000407	

WO 2000US12553	A	20000509
US 2000257816	P	20001221
US 2000257867	P	20001221
US 2000257868	P	20001221
US 2000257869	P	20001221
US 2000746853	A	20001221
US 2001783637	A	20010214
US 2001269200	P	20010215
US 2001269203	P	20010215
US 2001276086	P	20010315
US 2001276151	P	20010315
US 2001276152	P	20010315
US 2001276217	P	20010315
US 2001279087	P	20010327
US 2001827503	A	20010406
US 2001827643	A	20010406
WO 2001US11376	A	20010406
US 2001293346	P	20010524
US 2001313495	P	20010821
US 2001313496	P	20010821
US 2001313497	P	20010821
US 200122038	A	20011116

Priority Applications (No Type Date): US 200122038 A 20011116; US 9828550 A 19980224; US 99133407 P 19990510; US 99375666 A 19990817; US 2000195264 P 20000407; WO 2000US12553 A 20000509; US 2000257816 P 20001221; US 2000257867 P 20001221; US 2000257868 P 20001221; US 2000257869 P 20001221 ; US 2000746853 A 20001221; US 2001783637 A 20010214; US 2001269200 P 20010215; US 2001269203 P 20010215; US 2001276086 P 20010315; US 2001276151 P 20010315; US 2001276152 P 20010315; US 2001276217 P 20010315 ; US 2001279087 P 20010327; US 2001827503 A 20010406; US 2001827643 A 20010406; WO 2001US11376 A 20010406; US 2001293346 P 20010524; US 2001313495 P 20010821; US 2001313496 P 20010821; US 2001313497 P 20010821

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
US 20020087148	Al	46	A61B-017/00	Cont of application US 9828550 Provisional application US 99133407 Div ex application US 99375666 Provisional application US 2000195264 Cont of application WO 2000US12553 Provisional application US 2000257816 Provisional application US 2000257867 Provisional application US 2000257868 Provisional application US 2000257869 Cont of application US 2000746853 CIP of application US 2001783637 Provisional application US 2001269200 Provisional application US 2001269203 Provisional application US 2001276086 Provisional application US 2001276151 Provisional application US 2001276152 Provisional application US 2001276217 Provisional application US 2001279087 CIP of application US 2001827503 CIP of application US 2001827643 CIP of application WO 2001US11376 Provisional application US 2001293346

Provisional application US 2001313495
Provisional application US 2001313496
Provisional application US 2001313497
Div ex patent US 6197017

Abstract (Basic): US 20020087148 A1

NOVELTY - A disposable mechanically drivable mechanism (26) is connected to a tool (18) through a disposable and flexible shaft (30) for insertion into a body vessel. A receiver (24) connected to a remote drive unit (12) receives the drivable mechanism.

USE - Catheter for introducing tools for monitoring cutting or lysing or puncturing, filling or draining, implanting, sticking, removing and delivering drug agents, hemostasis, repairing, anastomosis, coagulation, laser application, dilation, retraction, heating or cooling of organs, during minimally invasive surgery for cardiac valve treatment e.g. for mitral valve.

ADVANTAGE - Since the shaft is flexible, a user can controllably bend and direct the shaft to target site precisely. The arrangement minimizes the number of components that operate within the sterile field, as drive unit is maintained at a location remote from the sterile field.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the catheter.

Drive unit (12)

Tool (18)

Receiver (24)

Disposable mechanically drivable mechanism (26)

Shaft (30)

pp; 46 DwgNo 6/49

Derwent Class: P31; S05

International Patent Class (Main): A61B-017/00

17/26, TI/1 (Item 1 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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014327063

WPI Acc No: 2002-147766/200219

Treatment device for incompetent anatomical valve or sphincter within patient's body has catheter with balloon at far end, heating element and suction lumen

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straight shape, having a stiffening wire inserted through the coil strands.

21/3,AB/5 (Item 5 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00761022

APPARATUS AND METHOD FOR ADVANCING COOLING CATHETER

SYSTEME ET PROCEDE POUR FAIRE AVANCER UN CATHETER DE REFROIDISSEMENT

Patent Applicant/Assignee:

ALSIUS CORPORATION, Suite 150, 15770 Laguna Canyon Road, Irvine, CA 92618
, US, US (Residence), US (Nationality), (For all designated states
except: US)

Patent Applicant/Inventor:

WALKER Blair D, 24742 San Doval Lane, Mission Viejo, CA 92691, US, US
(Residence), US (Nationality), (Designated only for: US)

Legal Representative:

ALONZO Arlyn L, Alsius Corporation, Suite 150, 15770 Laguna Canyon Road,
Irvine, CA 92618, US

Patent and Priority Information (Country, Number, Date):

Patent: WO 200072779 A2 20001207 (WO 0072779)

Application: WO 2000US14782 20000526 (PCT/WO US0014782)

Priority Application: US 99321350 19990527

Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK
DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR
LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ
TM TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 2443

English Abstract

A cooling catheter is advanced through the femoral vein of a patient into the vena cava for therapeutic or prophylactic cooling of a patient by first sliding a peel-away protector sheath down the catheter until it covers and constrains a distal heat exchange element, such as plural hollow fibers through which coolant flows. An introducer sheath is advanced into the femoral vein, and then the protector sheath with heat exchange element therein is advanced into the introducer sheath. The protector sheath is then peeled away and removed from the catheter, and the catheter can be advanced as desired through the introducer sheath. When desired, the introducer sheath can be removed from the patient by peeling away the sheath from the catheter.

22/6/2 (Item 2 from file: 349)

00819618 **Image available**

HEAT EXCHANGE CATHETER WITH IMPROVED INSULATED REGION

22/3,AB/1 (Item 1 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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00864645

DEVICES AND METHODS FOR REPAIR OF VALVES IN THE HUMAN BODY

DISPOSITIFS ET PROCEDES PERMETTANT DE REPARER DES VALVULES DU CORPS HUMAIN

Induced ; Coronary Artery Bypass--nursing--NU; Hypothermia, Induced --nursing--NU; Perioperative Care--nursing--NU; Surgical Procedures, Minimally Invasive

14/7,K/8

DIALOG(R) File 155: MEDLINE(R)

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09165364 20468586 PMID: 11016371

Surgical strategies in patients at high risk for stroke undergoing coronary artery bypass grafting.

Trehan N; Mishra M; Kasliwal R R; Mishra A

Escorts Heart Institute and Research Centre, New Delhi, India.

Annals of thoracic surgery (UNITED STATES) Sep 2000, 70 (3) p1037-45

, ISSN 0003-4975 Journal Code: 15030100R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

BACKGROUND: Perioperative stroke represents one of the major complications following **coronary** artery bypass grafting (CABG). The present study was designed to evaluate the use of an individualized surgical approach for reducing neurological injury in patients undergoing CABG at high risk of stroke from aortic atherosclerosis or carotid disease.

METHODS: Between January 1993 and June 1999, 6,138 patients undergoing elective CABG were evaluated by intraoperative transesophageal echocardiography. Patients were screened preoperatively for internal carotid artery disease. Based on the intraoperative transesophageal echocardiography findings the surgical technique was individualized: hypothermic circulatory arrest with aortic atherectomy, CABG combined with transmyocardial laser revascularization on the beating heart, off-pump CABG by midsternotomy, ministernotomy, minimally invasive direct CABG, hybrid procedure, and so on. Patients were divided into four groups: a low-risk group (no significant aortic or carotid disease); an aortic atheromatous disease group (A.ATH); a carotid disease group (CD); and a carotid disease combined with aortic atheromatous disease group (CD + A.ATH). **RESULTS:** The incidence of stroke in the low-risk group (n = 5,043) was 0.92% compared with 0.96% in the A.ATH group (n = 918). In the CD group (n = 166) the incidence of stroke was 0.6% whereas it was 0% in the CD + A.ATH group (n = 11). **CONCLUSIONS:** Preoperative and intraoperative screening can detect extensive atherosclerosis of the proximal aorta and internal carotid artery. Selective use of surgical techniques in this group of high-risk patients can prevent adverse neurologic sequelae while achieving complete myocardial revascularization.

Record Date Created: 20001017

Record Date Completed: 20001017

Descriptors: Cerebrovascular Accident--prevention and control--PC; * **Coronary Artery Bypass--methods--MT;** Aged; Arteriosclerosis--diagnosis --DI; Carotid Artery Diseases--diagnosis--DI; Echocardiography, Transesophageal; **Hypothermia, Induced ;** Intraoperative Care; Middle Age; Risk Factors; Sternum--surgery--SU; **Surgical Procedures, Elective;** **Surgical Procedures, Minimally Invasive**

File 5:Biosis Previews(R) 1969-2003/Aug W1
File 73:EMBASE 1974-2003/Aug W1
Set Items Description
S1 501404 'MINIMALLY INVASIVE SURGERY' OR 'SURGERY, MINIMALLY INVASIVE' OR 'SURGICAL PROCEDURES, MINIMALLY INVASIVE' OR DC='E4.80'
S2 9574 'INDUCED HYPOTHERMIA' OR DC='E3.525' OR 'ARTIFICIAL HIBERNATION' OR 'ARTIFICIAL HYPOTHERMIA' OR 'BODY COOLING' OR 'CHILLING' OR 'EXTRACORPOREAL HYPOTHERMIA' OR 'HIBERNATION,ARTIFICIAL' OR 'HYPOTHERMIA, ARTIFICIAL' OR R11
S3 4031837 CORONARY OR CARDIAC OR HEART OR VASCULAR OR ANEURYSM? OR C-
ARDIOVASCULAR
S4 124911 CATHETER? ?
S5 47 S1 AND S2 AND S3 AND S4
S6 0 S3(L)S1
S7 72383 S3/DE AND S1
S8 45 S5 AND S7
S9 45 RD (unique items)
S10 7 S9/2003
S11 38 S9 NOT S10
S12 2 S11/2002
S13 36 S11 NOT S12
S14 36 Sort S13/ALL/PY,D

12/6/1 (Item 1 from file: 73)
11881474 EMBASE No: 2002454266

Transcutaneously measured near-infrared spectroscopic liver tissue oxygenation does not correlate with hepatic venous oxygenation in children
2002

12/6/2 (Item 2 from file: 73)
11873243 EMBASE No: 2002447101

Treatment of trapped CCF by direct puncture of the cavernous sinus by infraocular trans-SOF approach: Case report and anatomical basis
2002

14/6/1 (Item 1 from file: 73)
11467696 EMBASE No: 2002039203

Hepatosplanchnic oxygenation is better preserved during mild hypothermic than during normothermic cardiopulmonary bypass
2001

14/6/4 (Item 4 from file: 73)
11129066 EMBASE No: 2001147613

Is compartment pressure related to plasma colloid osmotic pressure, in patients during and after cardiac surgery?
2001

14/6/5 (Item 5 from file: 73)
10983204 EMBASE No: 2001025416
Mechanical circulatory support systems - A review
2000

14/6/6 (Item 6 from file: 73)
07913892 EMBASE No: 1999387313
Extracorporeal membrane oxygenation for adult cardiac support: The Allegheny experience

1999

14/6/7 (Item 7 from file: 73)
07903942 EMBASE No: 1999377452
Intraoperative evaluation of tissue perfusion in high-risk patients by invasive and noninvasive hemodynamic monitoring
1999

14/6/8 (Item 8 from file: 73)
07856511 EMBASE No: 1999329840
Cardiogenic shock
CHOQUE CARDIOGENICO
1999

14/6/15 (Item 15 from file: 73)
06976834 EMBASE No: 1997261500
The influence of infection on survival and successful transplantation in patients with left ventricular assist devices
1997

14/6/16 (Item 16 from file: 73)
06874492 EMBASE No: 1997158820
Myocardial protection by pressure- and volume-controlled continuous hypothermic coronary perfusion (PVC-CONTHY-CAP) in combination with ultra-short beta-blockade and nitroglycerine
1997

14/6/17 (Item 17 from file: 73)
06866085 EMBASE No: 1997150411
Intermittent antegrade/selective cerebral perfusion during circulatory arrest for repair of the aortic arch
1997

14/6/19 (Item 19 from file: 73)
06797776 EMBASE No: 1997080125
Model-driven closed-loop feedback infusion of atracurium and vecuronium during hypothermic cardiopulmonary bypass
1997

14/6/20 (Item 20 from file: 73)
06667506 EMBASE No: 1996332387
Effect of additional intraaortic balloon support during weaning from a left ventricular assist system
1996

14/6/21 (Item 21 from file: 73)
06535288 EMBASE No: 1996196955
Jugular bulb temperature: Comparison with brain surface and core temperatures in neurosurgical patients during mild hypothermia
1996

14/6/22 (Item 22 from file: 73)
06432312 EMBASE No: 1996091681
Usefulness of transesophageal echocardiography in diagnosing and guiding correct placement of a right ventricular assist device malpositioned in the left atrium.

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1996

- 14/6/23 (Item 23 from file: 73)
06317952 EMBASE No: 1995353847
Advantages of delayed sternal closure in cardiac -compromised adult patients
1995
- 14/6/24 (Item 24 from file: 73)
06233807 EMBASE No: 1995268238
Hemorheological and hemodynamic analysis of hypervolemic hemodilution therapy for cerebral vasospasm after aneurysmal subarachnoid hemorrhage
1995
- 14/6/25 (Item 25 from file: 73)
06075992 EMBASE No: 1995106471
Clinical investigation of antiarrhythmic devices
1995
- 14/6/26 (Item 26 from file: 73)
06072930 EMBASE No: 1995103407
Congestive heart failure and pulmonary edema for the emergency physician
1995
- 14/6/27 (Item 27 from file: 73)
05955761 EMBASE No: 1994372858
Hemopump fails as bridge to transplantation in postinfarction ventricular septal defect.
1994
- 14/6/28 (Item 28 from file: 73)
05882720 EMBASE No: 1994300075
Enhanced oxygen delivery by perflubron emulsion during acute hemodilution
1994
- 14/6/31 (Item 31 from file: 73)
05600782 EMBASE No: 1994012039
Left ventricular pressure/volume analysis as an innovative method to evaluate dynamic cardiomyoplasty effects
1993
- 14/6/33 (Item 33 from file: 73)
05515533 EMBASE No: 1993283632
Monitoring of haemodilution
MONITORING BEI HAMODILUTION
1993
- 14/6/35 (Item 35 from file: 73)
05259362 EMBASE No: 1993027447
The influence of different levels of PEEP on peripheral tissue perfusion measured by subcutaneous and transcutaneous oxygen tension
1992
- 14/7,K/2 (Item 2 from file: 73)
DIALOG(R) File 73:EMBASE

(c) 2003 Elsevier Science B.V. All rts. reserv.
11319175 EMBASE No: 2001333323

Coronary artery bypass with only in situ bilateral internal thoracic arteries and right gastroepiploic artery

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Circulation (CIRCULATION) (United States) 18 SEP 2001, 104/12 SUPPL. (i76-i80)

CODEN: CIRCA ISSN: 0009-7322

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 14

Background - With the rapid advance of **catheter** intervention, the direction taken by surgeons is not only to make conventional CABG less invasive but also to pursue better long-term results by using more arterial conduits. Methods and Results - Between July 1989 and April 2000, 239 patients (218 men, 21 women) with a mean age of 59.7 (range 39 to 79) years underwent CABG with exclusive use of both internal thoracic arteries (ITAs) and the right gastroepiploic artery (RGEA). ITA grafts were harvested by using the skeletonization technique. Most patients (96%) had either triple-vessel or left main disease. Fifty percent of the patients were diabetic, and 16 were being treated with insulin. The left ventricular ejection fraction was <=40% in 46 patients (19%). Eleven patients (5%) had chronic renal failure and were on hemodialysis. Follow-up was completed in 235 patients (98%). Postoperative follow-up averaged 43 (range 1 to 129) months. Sequential grafting was performed in 64 patients, and the mean number of anastomoses was 3.3. One patient (0.4%) died of mediastinitis on the 53rd postoperative day. Graft patency was confirmed angiographically in 230 patients (96%) 2 to 3 weeks after surgery. The patency rate was 97.1% for the left ITA, 99.6% for the right ITA, and 95.5% for the RGEA. Five-year actuarial survival rate was 92.9%, and the **cardiac** death-free rate was 97.8%. Conclusions - Complete arterial grafting with both ITAs and RGEA was associated with minimal operative risk, a high early graft patency rate, and excellent long-term results.

MEDICAL DESCRIPTORS:

* coronary artery bypass graft; *internal mammary artery; *gastroepiploic artery
artery graft; diabetes mellitus--drug therapy--dt; heart left ventricle ejection fraction; chronic kidney failure--therapy--th; hemodilution; follow up; postoperative care; mediastinitis; graft patency; angiography; survival rate; heart death; surgical risk; heart muscle revascularization; treatment outcome; human; male; female; major clinical study; aged; adult; article; priority journal

EMTREE CODES:

...140.380.390.380; G2.140.390.380.380; C2.905.905.475.460; E2; E3.525 ;
E1.280; E2.530; N1.20.665.380.35; N1.20.665.380.510...
...50.50; C1.270; C1.180.835; E8.270.845; C1.140; C2.140.385; E4.80 ;
N6.880; N7.880; J2.20.10; B2.60.60.60.10.40; L2...

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery
037 Drug Literature Index

DIALOG(R) File 73:EMBASE

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11134610 EMBASE No: 2001150609

Correction of congenital heart defects and mitral valve operations using limited anterolateral thoracotomy

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Heart Surgery Forum (HEART SURG. FORUM) (United States) 2001, 4/1
(34-39)

CODEN: HSFEA ISSN: 1098-3511

DOCUMENT TYPE: Journal ; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 22

Purpose: Median sternotomy, which generally is used as a standard access for atrial septal defect (ASD) and mitral valve operations, has a significant risk of postoperative instability/osteomyelitis of the sternum. Moreover, especially in young women, the resulting large scar is a poor cosmetic result that may have adverse psychological consequences. Our presentation suggests that these difficulties may be avoided by the use of a less invasive approach consisting of a limited anterolateral thoracotomy with standard cannulation. Material and methods: From June 1997 until December 1999, 13 women, mean age 31.9 +/- 9.2 years, with atrial septum defect (n = 8), sinus venosus defect with partial anomalous pulmonary venous connection (n = 1), left atrial myxoma (n = 1) or mitral valve regurgitation (n = 3), were scheduled for less invasive operation. In all cases a double lumen tube was used for ventilation. After a submammarian skin incision of about 10 cm a limited anterolateral thoracotomy was performed in the fifth right intercostal space. For cannulation of the ascending aorta a trochar cannula was used. Both caval veins were cannulated by angled vena cava catheters. Standard cardiopulmonary bypass was established using normothermia in all patients undergoing operations with correction of congenital heart defects and mild hypothermia (32degreesC) in the three patients undergoing mitral valve operation. Surgery was performed in cardioplegic arrest using Bretschneider's solution. All corrections of congenital heart defects were performed by GoretexSUP(R) patches. Mitral valve reconstruction was carried out in two patients, and one patients underwent mitral valve replacement. Results: No complications occurred in any of the 13 patients peri- or postoperatively. Total time of operation was 211.9 +/- 36.0 minutes, the perfusion time was 77.0 +/- 25.8 minutes, and the aortic cross-clamp time was 51.8 +/- 21.9 minutes. Mean stay in ICU was 1.2 +/- 0.4 days (total hospital stay: 7.8 +/- 2.2 days). Postoperative thoracic x-ray and cardiac echocardiography/dopplersonography revealed no pathological findings in any patients. Conclusion: Atrial septal defect operations, including partial anomalous pulmonary venous connection, left atrial myxoma and mitral valve operations, can be performed safely and effectively using a limited anterolateral thoracotomy and standard cannulation technique with excellent cosmetic results.

MEDICAL DESCRIPTORS:

*congenital heart malformation--congenital disorder--cn; *congenital heart malformation--surgery--su; *mitral valve replacement; *thoracotomy heart atrium septum defect--congenital disorder--cn; heart atrium septum defect--surgery--su; sinus venosus; pulmonary vein malformation --congenital disorder--cn; pulmonary vein malformation--surgery--su; heart

atrium myxoma--congenital disorder--cn; heart atrium myxoma--surgery-su ; heart left atrium; mitral valve regurgitation--congenital disorder--cn; mitral valve regurgitation--surgery-su; **minimally invasive surgery** ; artificial ventilation; surgical technique; skin incision; cannulation; ascending aorta; superior cava vein; inferior cava vein; **catheter** ; cardiopulmonary bypass; body temperature; **induced hypothermia** ; cardioplegia; postoperative complication--complication--co; operation duration; heart perfusion; aorta clamping; length of stay; intensive care unit; hospitalization; postoperative period; thorax radiography; electrocardiogram...

EMTREE CODES:

...610.175.167.170; C5.50.610.175.175.140.160; C5.50.610.175; **E4.80** ; E4.80.140.390.395.395; E4.80.870.390.395.395; E4.80...
...140; E7.30.140.140; E3.525.285; E8.690.860.110; H2.855.110; **E3.525** ; E4.80.140.390; E4.80.870.390; C1.120.710; C6.180.710...

SECTION HEADINGS:

018 **Cardiovascular Diseases and Cardiovascular Surgery**
027 **Biophysics, Bioengineering and Medical Instrumentation**

14/7,K/9 (Item 9 from file: 73)

DIALOG(R) File 73:EMBASE

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07807204 EMBASE No: 1999296672

Port-access cardiac surgery: Anesthetic techniques, equipment, applications, experience, and outcomes

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Seminars in Cardiothoracic and Vascular Anesthesia (SEMIN. CARDIOTHORAC. VASC. ANESTH.) (United States) 1999, 3/2 (74-84)

CODEN: SCVAF ISSN: 1089-2532

DOCUMENT TYPE: Journal; Review

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 47

Port-Access (Heartport, Inc, Redwood City, CA) minimally invasive surgery has been developed to allow surgeons to complete a wide variety of **cardiac** surgical procedures while avoiding a median sternotomy and the associated trauma and debility. Cardiopulmonary bypass is established using the EndoDirect (Heartport, Inc) or EndoCPB systems which consist of five **catheters** and cannulae providing the same functions as those used in conventional cardiac surgery. These systems enable surgeons to obtain appropriate myocardial protection, circulatory support, and operating conditions while operating through a small intercostal incision or port. Transesophageal echocardiography and/or fluoroscopy are used to evaluate patient anatomy including assessment of the aorta, to facilitate the placement of **catheters** and cannulae, and to monitor during the conduct of cardiopulmonary bypass. Clinical reports have shown broad applicability of Port-Access procedures with favorable outcomes. Morbidity and mortality compare well with reported rates for conventional surgery. Experience with multivessel **coronary** artery bypass grafting suggests that complete revascularization for all **coronary** beds can be accomplished using a variety of venous and arterial conduits. Clinical studies suggest that Port-Access surgery is associated with short postoperative duration of tracheal intubation, intensive care unit stay, and hospital stay, a low incidence of new-onset atrial fibrillation, and rapid return to normal activities. Clinical experience continues to expand the indications for

Port-Access minimally invasive cardiac surgery as well as to refine and enhance surgical procedures.

MEDICAL DESCRIPTORS:

* heart surgery; *anesthesia
minimally invasive surgery ; sternotomy; injury; oligophrenia;
cardiopulmonary bypass; assisted circulation; transesophageal
echocardiography; fluoroscopy; coronary artery bypass graft; endotracheal
intubation; intensive care; heart atrium fibrillation; human; review

EMTREE CODES:

E4.80.140.390; E4.80.870.390; E3.55; E4.80 ; E4.80.870; E4.80.835; C6.450;
F3.490; E3.525.285; E3.525 ; E1.130.135.245; E1.215.250.250; E1.215.745;
E4.80.140...

SECTION HEADINGS:

009 Surgery
.018 Cardiovascular Diseases and Cardiovascular Surgery
024 Anesthesiology

14/7,K/10 (Item 10 from file: 73)

DIALOG(R) File 73:EMBASE

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07380286 EMBASE No: 1998285556

Closure of short, wide patent ductus arteriosus with cardiopulmonary bypass and balloon occlusion

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Annals of Thoracic Surgery (ANN. THORAC. SURG.) (United States) 1998,
66/1 (277-278)

CODEN: ATHSA ISSN: 0003-4975

PUBLISHER ITEM IDENTIFIER: S0003497598003622

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 5

The wide, short patent ductus arteriosus in adults and older adolescents poses an extreme hazard with standard closed ligation techniques. The method of transpulmonary balloon catheter occlusion and repair of pediatric ductus arteriosus is herein reported in older patients using a Foley catheter and normothermic bypass. Transesophageal echocardiography is crucial in assessing the size of the ductus and confirming adequacy of repair. The technique is simple and safe even in the presence of a wide, short ductus.

MEDICAL DESCRIPTORS:

*patent ductus arteriosus--congenital disorder--cn; *patent ductus arteriosus--surgery--su; *cardiopulmonary bypass; *balloon catheter transesophageal echocardiography; surgical technique; arteriotomy; suturing method; surgical approach; induced hypothermia ; heart arrest; human; female; case report; adolescent; adult; article; priority journal

EMTREE CODES:

...167.170.670; C5.50.610.175.175.140.160.670; C5.50.610.175; E4.80 ;
E3.525.285; E7.30.840.85; E7.30.140.140; E1.130.135...
...E4.80.840; E4.80.140.920.80; E4.80.840.845; E4.80.835; E3.525 ;
C2.140.385.390; B2.60.60.60.10.40; J2.20.10; L2...

SECTION HEADINGS:

007 Pediatrics and Pediatric Surgery
.018 Cardiovascular Diseases and Cardiovascular Surgery

Serial 10/057334

August 7, 2003

14/7,K/11 (Item 11 from file: 73)

DIALOG(R) File 73:EMBASE

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07367578 EMBASE No: 1998243327

Successful treatment of a novacor LVAD malfunction without repeat sternotomy

Hammel D.; Tjan D.T.; Scheld H.H.; Schmid C.; Loick M.; Deng M.C.

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Thoracic and Cardiovascular Surgeon (THORAC. CARDIOVASC. SURG.) (Germany) 1998, 46/3 (154-156)

CODEN: TVCHA ISSN: 0171-6425

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 7

Implantable left-ventricular assist devices have been remarkably free of mechanical failures. We describe an uncommon Novacot N100 PCq(c) LVAS malfunction caused by an internal short circuit of the device due to urine aspiration via the vent line. Device replacement was managed via a subcostal approach without sternotomy. Patient recovery was uneventful and successful transplantation was performed one month after the device exchange.

DEVICE BRAND NAME/MANUFACTURER NAME: Novacor N100PCq LVAS; Swan-Ganz catheter

MEDICAL DESCRIPTORS:

* heart failure--complication--co; * heart failure--surgery--su; * assisted circulation

EMTREE CODES:

C2.140.385.390; C1.120; C6.180; E4.80 ; E3.525 ; C2.140.385.570.40; E4.80.840.435; E2.270; C1.120.710...

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery
037 Drug Literature Index

14/7,K/12 (Item 12 from file: 73)

DIALOG(R) File 73:EMBASE

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07299727 EMBASE No: 1998203306

Anesthesia for deep hypothermic circulatory arrest in adults: Experience with the first 50 patients

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Journal of Cardiothoracic and Vascular Anesthesia (J. CARDIOTHORAC. VASC. ANESTH.) (United States) 1998, 12/3 (260-264)

CODEN: JCVAE ISSN: 1053-0770

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 33

Objective: To evaluate the efficacy of a simple method of central nervous system (CNS) protection in patients undergoing deep hypothermic circulatory arrest (DHCA) lasting less than 30 minutes, for a variety of complex cardiovascular procedures. Design: A retrospective case review. Setting: A university teaching hospital. Participants: Fifty consecutive patients (25 women, 25 men) undergoing elective or emergency cardiovascular operations requiring DHCA between August 1991 and December 1996. Interventions:

Patients underwent DHCA for a variety of surgical procedures. Neurologic protection was with thiopental, ice packs to the head, and systemic core hypothermia to a nasopharyngeal temperature (NPT) of 18degrees to 20degrees C. Measurements and Main Results: The mean duration of circulatory arrest was 18 +/- 10 minutes (range, 5 to 42 minutes). The mean NPT at time of arrest was 18.7 +/- 1.7 degrees C. Three patients (6%) had gross CNS morbidity, one of whom died. The circulatory arrest times for these three patients were 8, 39, and 40 minutes. Perioperative mortality was 8% (n = 4). The circulatory arrest times for the patients who died were 12, 13, 23, and 39 minutes. Conclusion: The anesthetic management of DHCA described is simple, effective, and safe, and can be performed in any institution that performs cardiac surgery.

MEDICAL DESCRIPTORS:

* heart arrest; *anesthesia
heart surgery; cardiovascular procedures; brain protection; induced hypothermia; temperature; aorta disease--surgery--su; heart disease --surgery--su; cardiopulmonary bypass; surgical mortality; surgical technique; premedication; central venous catheter; human; male; female; clinical article; aged; adult; intramuscular drug administration; intravenous drug administration; article; priority...

EMTREE CODES:

...390; E5.140; E2.710; E5.715.715.715; E5.610; E5.715.715.720; E3.525 ;
E8.690.860; H2.855; C2.140.920.40; E4.80 ; C2.140.385; E3.525.285;
C1.270.565; E8.270.565; E4.80...

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery

024 Anesthesiology

037 Drug Literature Index

14/7,K/13 (Item 13 from file: 73)

DIALOG(R)File 73:EMBASE

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07193706 EMBASE No: 1998073852

Mild hypothermia anesthesia for carotid microendarterectomy in a patient with ischemic heart disease

Unetani H.; Nakao M.; Kawaguchi R.; Nakatani K.; Hazama K.; Kajiyama S. H. Unetani, Division of Anesthesia, Intensive Care Medicine, Hiroshima Prefectural Hiroshima Hos., Hiroshima 734 Japan

Japanese Journal of Anesthesiology (JPN. J. ANESTHESIOL.) (Japan) 1998 , 47/2 (208-212)

CODEN: MASUA ISSN: 0021-4892

DOCUMENT TYPE: Journal; Article

LANGUAGE: JAPANESE SUMMARY LANGUAGE: JAPANESE; ENGLISH

NUMBER OF REFERENCES: 13

A 69 year-old male with ischemic heart disease indicated for coronary artery bypass grafting was scheduled for carotid microendarterectomy. We induced mild hypothermia technique with vasodilation and surface cooling by convecting warming device. We examined hemodynamics by pulmonary artery catheter. Anesthesia was induced with thiamylal, fentanyl, midazolam and isoflurane in nitrous oxide and oxygen. Following administration of vecuronium, trachea was intubated. Pulmonary artery catheter was inserted from the femoral vein. Dopamine, dobutamine 3-5 mug - kgsup -sup 1 - minsup -sup 1 and PGEinf 1 5-10 ng - kgsup -sup 1 - minsup -sup 1 were continuously administered to keep peripheral blood circulation and cardiac output (CO). Systemic vascular resistance decreased from 1800 to 591 dyne - s - cmsup -sup 5 and CO increased from 2.8 to 6.9 l - minsup -sup 1.

Serial 10/057334

August 7, 2003

The occlusion of blood flow of the right carotid artery for 40 min at 34.5°C of rectal temperature did not cause any neurological deficits. No other complications such as arrhythmia, myocardial ischemia and bleeding tendency were observed. Keeping peripheral blood circulation and uniform cooling and warming are important in inducing mild hypothermia safely in a patient with ischemic heart disease.

MEDICAL DESCRIPTORS:

*ischemic heart disease--surgery--su
carotid endarterectomy; induced hypothermia ; hemodynamic monitoring;
systemic vascular resistance; heart output; carotid artery flow; human;
male; case report; aged; article

EMTREE CODES:

C2.140.385.440; E4.80 ; E4.80.140.920.80.140; E3.525 ; E1.130.400;
E1.570.380; E5.570.380; E8.540.140.120.910...

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery
024 Anesthesiology
037 Drug Literature Index

14/7,K/14 (Item 14 from file: 73)

DIALOG(R) File 73:EMBASE

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07059183 EMBASE No: 1997341039

Effect of transaortic catheter venting on left ventricular function during venoarterial bypass

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ASAIO Journal (ASAIO J.) (United States) 1997, 43/5 (M838-M841)

CODEN: AJOUE ISSN: 1058-2916

DOCUMENT TYPE: Journal; Conference Paper

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 8

Although venoarterial bypass (VAB) or percutaneous cardiopulmonary support (PCPS) can improve hemodynamics in patients with serious cardiac decompression, some cannot be weaned from circulatory support. Insufficient unloading of the left ventricle (LV) with bland stagnation is a main cause of unsuccessful LV recovery during PCPS. This investigation was undertaken to evaluate the effectiveness of transaortic catheter venting (TACV) for LV unloading. Eight mongrel dogs (mean weight 16.3 kg, range 14-20 kg) underwent VAB with TACV. In addition to monitoring standard hemodynamic parameters, the slope of the LV end systolic pressure-volume relationship (Emax) during transient occlusion of the inferior vena cava, the slope of LV end systolic pressure-stroke-volume (Ea), external stroke work (SW), LV pressure-volume area (PVA), and slope of the SW-end diastolic volume relationship (preload recruitable stroke work: PRSW) were assessed by means of a micro-tip manometer and a conductance catheter . We measured data under the following four conditions; before circulatory support (baseline), during isolated VAB, VAB with TACV, and VAB with TACV plus intra-aortic balloon pumping (IABP). The LV contractility (Emax) and LV elastance (Ea) were equivalent for the four conditions. By comparison with baseline and VAB with TACV, LV energy (PVA) and work (SW, PRSW) were significantly reduced by TACV (1283.9 ± 197.1 vs. $793.3 \pm 124.8 \times 10^{sup -4}$ J, 897.1 ± 147.2 vs. $474.2 \pm 83.0 \times 10^{inf -4}$ J and 35.6 ± 2.7 vs. $25.7 \pm 1.7 \times 10^{inf -4}$ J/ml, respectively), and the PE/PVA increased

with TACV (30.4 ± 2.6 vs. $40.8 \pm 1.8\%$). In contrast, there was no significant difference in PVA, SW, PRSW, and PE/PVA between baseline and isolated VAB. These results suggest that TACV might be an adjunctive technique to VAB or PCPS for patients with LV failure.

MEDICAL DESCRIPTORS:

*arteriovenous shunt; * heart failure--surgery--su; * heart left ventricle function

animal experiment; animal model; animal tissue; assisted circulation; conference paper; decompression surgery; dog; heart output; heart stroke volume; nonhuman; surgical technique; systolic blood pressure

EMTREE CODES:

...110; E4.80.840.130.125; E4.80.840.60.110; C2.140.385.390; E4.80 ; G2.140.380; E5.280.275.60; J2.40.5; J2.60.10; J2.30.5; A10; E3.525 ; J1.200; E4.80.605.800.215; B2.60.60.20.20; E8.540...

SECTION HEADINGS:

005 General Pathology and Pathological Anatomy

009 Surgery

018 Cardiovascular Diseases and Cardiovascular Surgery

14/7,K/18 (Item 18 from file: 73)

DIALOG(R) File 73:EMBASE

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06844951 EMBASE No: 1997127507

Haemostasis during infrarenal aortic aneurysm surgery: Effect of volume loading and cross-clamping

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European Journal of Vascular and Endovascular Surgery (EUR. J. VASC.

ENDOVASC. SURG.) (United Kingdom) 1997, 13/1 (60-65)

CODEN: EJVSF ISSN: 1078-5884

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 25

Objectives: To study thrombin and plasmin activation during elective abdominal aortic aneurysm surgery. Design: Prospective study. Setting: University Hospital. Materials: Nine consecutive patients undergoing elective surgery were included. The mean age was 72 years (range 60-79). Blood samples were drawn: (1) before induction of anaesthesia; (2) after induction and Swan Ganz catheterisation; (3) just before cross-clamping; (4) before declamping; (5) 8 h postoperatively; (6) 18 h postoperatively. Chief outcome measures: Assays included: prothrombin time (PT), activated partial thromboplastin time (APTT), fibrinogen, prothrombin fragments (F1 + 2), anti-thrombin III (ATIII), plasminogen, alpha2-antiplasmin, haematocrit, platelet and serum protein for correction of haemodilution. Data were expressed as mean (S.D.). Differences between mean values were tested by means of the ANOVA for repeated measures and the Wilcoxon signed rank test. Main results: The APTT and TT did not change until heparinisation. The F1 + 2 were already elevated preoperatively. After correction for haemodilution the AT III and alpha2-antiplasmin decreased in time ($p = 0.009$ and 0.0023 , respectively) and the F1 + 2 increased ($p < 0.0001$). Postoperatively (t5 and 6) the values normalised again. Conclusions: The coagulation and fibrinolytic systems are activated during and after elective aortic replacement. Standard tests, like the prothrombin and partial thromboplastin time, are unreliable when assessing the coagulation status of the patient.

MEDICAL DESCRIPTORS:

*abdominal aorta **aneurysm** --surgery-su; *hemostasis
...human; hyperemia; partial thromboplastin time; postoperative period;
preoperative period; priority journal; prothrombin time; swan ganz
catheter; thrombocyte; time

EMTREE CODES:

C2.10; C2.140.920.30.50; C2.140.920.40.50; **E4.80** ; E4.80.840; G2.315; L1;
E3.55; E4.80.140.920.60; E5...
...G1.550.710.300.300; G2.315.100.300; E8.385.275; G2.315.275; **E3.525** ;
E2.230; E5.380; B2.60.60.60.10.40; J2.20.10; C2...

14/7,K/29 (Item 29 from file: 73)

DIALOG(R) File 73:EMBASE

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05852094 EMBASE No: 1994258810

Epidural cooling for regional spinal cord hypothermia during thoracoabdominal aneurysm repair

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Department of Anaesthesia, Massachusetts General Hospital, 32 Fruit
St., Boston, MA 02114 United States

Journal of Vascular Surgery (J. VASC. SURG.) (United States) 1994,
20/2 (304-310)

CODEN: JVSUE ISSN: 0741-5214

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Purpose: We investigated the feasibility of achieving regional hypothermia of the spinal cord with an infusion of iced (4degreeC) saline solution administered into an epidural **catheter** while monitoring cerebral spinal fluid (CSF) temperature in eight patients undergoing thoracic or thoracoabdominal **aneurysm** resection. Methods: As part of the anesthetic management, an epidural **catheter** was placed at T11-12, and a subarachnoid thermistor **catheter** was placed at L3-4. Approximately 30 minutes before aortic cross-clamping, iced (4degreeC) saline solution was infused into the epidural **catheter** until CSF temperature decreased to approximately 25degreeC. The infusion was then adjusted to maintain this temperature until the aorta was unclamped. The subarachnoid **catheter** was also used to measure CSF pressure and provide for CSF drainage. Surgery was performed in all patients with a clamp-and-sew technique with selective intercostal vessel reattachment. Results: Infusion of a mean volume of 489 ml (range 80 to 1700 ml) of iced saline solution into the epidural space before aortic cross-clamping led to a decrease in mean CSF temperature to 26.9degreeC (range 25degree to 28.8degreeC) in 15 to 90 minutes. During cross-clamping and aortic replacement the mean CSF temperature was maintained between 25.2degree to 27.6degreeC and, with discontinuation of the infusion, returned to within 1degreeC of body core temperature by the end of the procedure. Body core temperature was not significantly affected by the epidural infusion. Mean CSF pressure increased during the epidural infusion but could be reduced by removing saline solution from the epidural space. No postoperative neurologic deficits were observed. Conclusion: Epidural cooling appears to be a satisfactory method of achieving regional spinal cord hypothermia in patients requiring resection of thoracic or thoracoabdominal aortic **aneurysms**.

MEDICAL DESCRIPTORS:

*abdominal aorta **aneurysm** --surgery-su; *aorta clamping; *profound induced hypothermia; *spinal cord injury--prevention--pc; *spinal cord injury--complication--co; *thoracic aorta **aneurysm** --surgery-su

adult; aged; article; cerebrospinal fluid; clinical article; cooling; core temperature; epidural **catheter**; epidural space; female; human; male; postoperative complication; priority journal

EMTREE CODES:

C2.10; C2.140.920.30.50; C2.140.920.40.50; **E4.80** ; E4.80.140.920.60;
E5.140; E5.280.285.280; **E3.525** ; C2.610.150.80.810; C2.610.603.804;
C6.450.610.804; E5...

14/7,K/30 (Item 30 from file: 73)

DIALOG(R)File 73:EMBASE

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05613712 EMBASE No: 1994015677

Right ventricular function after normothermic versus hypothermic cardiopulmonary bypass

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Journal of Thoracic and Cardiovascular Surgery (J. THORAC. CARDIOVASC.
SURG.) (United States) 1993, 106/6 (988-996)

CODEN: JTCSA ISSN: 0022-5223

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Normothermic systemic perfusion in patients undergoing cardiopulmonary bypass may compromise myocardial hypothermia, a mainstay for preservation of ventricular function during iatrogenic **cardiac** arrest. The right ventricle is the area of the **heart** most susceptible to rewarming. We prospectively evaluated myocardial rewarming and indexes of right ventricular function in 30 patients undergoing **coronary** artery bypass grafting randomized to receive moderate hypothermic (bladder temperature 25degree C) or normothermic perfusion and multidose cold blood cardioplegia during cardiopulmonary bypass. All patients had significant stenosis (> 70 %) of the right **coronary** artery, and in 27 of 30 the right **coronary** artery was revascularized. A right ventricular ejection fraction/volumetric **catheter** was used to assess right ventricular function by right ventricular ejection fraction and a preload (right ventricular end-diastolic volume) normalized right ventricular stroke work index in the prebypass and postbypass periods. Findings included the following: (1) Greater rewarming of all areas of the **heart** occurs with normothermic bypass, with the mean temperature difference at the end of each intracardioplegic period ranging from 4.0degree to 6.3degree C warmer than with hypothermic bypass; (2) the right ventricle was not more susceptible to rewarming than the posterior left ventricle or interventricular septum in either group; (3) right ventricular function did not differ between groups at any time in the study, including the immediate postarrest period; and (4) right ventricular function was preserved and equivalent to the prebypass baseline. We conclude that the moderate myocardial rewarming that occurs with normothermic perfusion does not compromise right ventricular preservation in patients with right **coronary** artery disease undergoing revascularization with multidose cold blood cardioplegia to maintain electromechanical arrest.

MEDICAL DESCRIPTORS:

*cardiopulmonary bypass; * heart right ventricle function
adult; article; body temperature; cardioplegia; clinical article;
controlled study; **coronary** artery disease--surgery--su; female; **heart**
muscle revascularization; **heart** preload; **heart** right ventricle ejection
fraction; hemodynamics; human; male; priority journal; profound induced

hypothermia; warming

EMTREE CODES:

...140.390; E4.80.870.390; J2.40.10; J2.10; C2.140.920.170; **E4.80** ; L2.20;
E4.80.140.390.170; E4.80.140.920.80.160; E4...
...G2.140.390; B2.60.60.60.10.40; J2.20.10; L2.60; J1; **E3.525** ; E5.385

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery

14/7,K/32 (Item 32 from file: 73)

DIALOG(R) File 73:EMBASE

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05556492 · EMBASE No: 1993324592

Early effects of right latissimus dorsi cardiomyoplasty on left ventricular function

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Magovern Sr. G.J.

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Circulation (CIRCULATION) (United States) 1993, 88/5 II (298-303)

CODEN: CIRCA ISSN: 0009-7322

DOCUMENT TYPE: Journal; Conference Paper

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Background. We hypothesized that left ventricular function could be improved with cardiomyoplasty using the right latissimus dorsi. Methods and Results. Five dogs underwent cardiomyoplasty using the right latissimus dorsi. Left ventricular volume and pressure were measured using sonomicrometry and a micromanometer catheter, respectively. Pressure volume loops were recorded with the muscle stimulated at 1:2 and with transient caval occlusion. During stimulated beats, there were significant increases in stroke work ($13.90+/-4.49$ vs $9.78+/-3.81$ g/m, $P<.01$), preload recruitable stroke work ($0.766+/-0.110$ vs $0.594+/-0.207$ g - msup -sup 1 - msup -sup 3, $P<.05$), and stroke volume ($15+/-4$ vs $10+/-3$ mL, $P<.05$) when compared with unstimulated beats. There were no changes in diastolic filling. This operation was done in 11 patients, with no operative deaths. Six weeks after surgery, resting left ventricular ejection fraction (LVEF) increased from $25+/-1.6\%$ to $35+/-3\%$ ($P<.05$), and left ventricular end-diastolic volume (LVEDV) decreased from $365+/-18$ to $307+/-24$ mL, ($P<.05$). Nine patients were alive at 6 months. Preoperative and 6-month LVEF and LVEDV for those 9 patients were $26+/-2\%$ and $29+/-2\%$ ($P=NS$) and $316+/-23$ and $261+/-22$ mL ($P<.05$), respectively. Conclusions. Long-term studies are needed to determine if these changes will improve patient survival.

MEDICAL DESCRIPTORS:

*congestive heart failure--surgery-su; * heart left ventricle function animal model; animal tissue; assisted circulation; conference paper; controlled study; dog; experimental surgery; heart left ventricle ejection fraction; heart left ventricle enddiastolic pressure; heart left ventricle pressure; heart left ventricle volume; heart stroke volume; latissimus dorsi muscle; male; nonhuman; priority journal

EMTREE CODES:

C2.140.385.390.160; **E4.80** ; G2.140.380; J2.60.10; J2.30.5; A10; **E3.525** ;
J1.200; J2.10; B2.60.60.20.20; E5.280.285.280; E8...

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery

14/7,K/34 (Item 34 from file: 73)

DIALOG(R) File 73:EMBASE

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05451432 EMBASE No: 1993219531

Analysis of cardiac assistance by latissimus dorsi cardiomyoplasty with a time varying elastance model

Sugiura S.; Harada K.; Yokoyama I.; Momomura S.; Naruse Y.; Makuuchi H.; Serizawa T.; Matsunaga H.; Iizuka M.; Furuse A.; Sugimoto T.

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Cardiovascular Research (CARDIOVASC. RES.) (United Kingdom) 1993, 27/6 (997-1003)

CODEN: CVREA ISSN: 0008-6363

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Objective: The clinical use of skeletal muscle cardiomyoplasty is limited because of its inadequate haemodynamic benefits. To facilitate experimental and clinical efforts to improve the efficacy of this technique, a mathematical model was proposed and its validity was tested in acute experiments. **Methods:** The model was based on the assumption that the skeletal muscle wrapped around the heart behaves as a time varying elastance that is connected in series with another time varying elastance representing the native heart. From this model two predictions were made: (1) Skeletal muscle augments the contractility of the heart by increasing the slope (E_{es}) of the end systolic pressure-volume relation; (2) time varying elastance of the skeletal muscle chamber ($E(s)(t)$) can be estimated from that of the assisted heart. These predictions were examined in experiments. In nine anaesthetised, open chest dogs, preconditioned latissimus dorsi muscle was transposed to wrap the heart. Left ventricular pressure (catheter tipped micromanometer), and volume (conductance catheter) were measured while reducing the preload by vena caval occlusion to evaluate E_{es} with 1:2 (stimulation: heart beat ratio) stimulation of the skeletal muscle. **Results:** With the stimulation of latissimus muscle, the end systolic pressure-volume relation was linear and E_{es} increased from 8.6(SEM 2.4) to 11.9(SEM 3.4) mm Hg-ml⁻¹. Estimated $E(s)(t)$ reflected the stimulation pattern and could account for the mechanism of the cardiac assistance. **Conclusions:** Skeletal muscle cardiomyoplasty improved the haemodynamic variable (E_{es}) as predicted by a mathematical model.

MEDICAL DESCRIPTORS:

*assisted circulation; * heart failure--surgery--su

EMTREE CODES:

E3.525 ; C2.140.385.390; E4.80 ; J1.100; E4.80.140.390; E4.80.870.390;
A2.70.70; H3...

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery

14/7,K/36 (Item 36 from file: 73)

DIALOG(R) File 73:EMBASE

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05006487 EMBASE No: 1992146703

Six years' experience with closed-chest decannulation of transthoracically inserted cardiac-assist balloon catheters

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1001 Blythe Blvd., Charlotte, NC 28203 United States

Texas Heart Institute Journal (TEX. HEART INST. J.) (United States)
1992, 19/1 (51-53)

CODEN: THIJD ISSN: 0730-2347

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

The efficiency and risks of a method that allows closed-chest decannulation of an intraoperatively inserted **cardiac** -assist balloon **catheter** are examined. The technique involves direct insertion of the balloon **catheter** into the ascending aorta under the protection of an indwelling silastic tourniquet. At the discretion of the surgeon, the tourniquet may be left in place or removed later through a small infrasternal incision. This method was applied for 6 years, from May 1985 to June 1991, in 18 patients. Satisfactory **cardiac** assistance was achieved in every patient, and no early or late complications or deaths were attributable to the technique. At the time of this report, 9 patients are still alive. The author recommends the application of the procedure whenever, in the course of open- **heart** operations, **cardiac** -assist intraaortic balloon pulsation becomes necessary and conventional transfemoral insertion is either impossible or inadvisable.

MEDICAL DESCRIPTORS:

article; ascending aorta; clinical article; human; open **heart** surgery; postoperative complication; priority journal; surgical risk; surgical technique; survival

EMTREE CODES:

...840.85; E1.130.100.60; E2.620.135.100.60; E5.145.100.60; **E3.525** ;
E5.140; J1.100; A7.10.30.60; A7.90.10; J2.40.10...
...E4.80.870.390; C1.120.710; C6.180.710; E4.80.715.710; J1; **E4.80** ;
E4.80.840; C1.180.835; E8.270.845

SECTION HEADINGS:

018 1Cardiovascular Diseases and **Cardiovascular** Surgery
027 Biophysics, Bioengineering and Medical Instrumentation

File 5:Biosis Previews(R) 1969-2003/Aug W1
File 73:EMBASE 1974-2003/Aug W1
File 34:SciSearch(R) Cited Ref Sci 1990-2003/Aug W1
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
File 144:Pascal 1973-2003/Jul W4
File 6:NTIS 1964-2003/Aug W1
File 2:INSPEC 1969-2003/Jul W4
File 8:Ei Compendex(R) 1970-2003/Jul W4
File 99:Wilson Appl. Sci & Tech Abs 1983-2003/Jun
File 65:Inside Conferences 1993-2003/Aug W1
File 94:JICST-EPlus 1985-2003/Jul W4
File 35:Dissertation Abs Online 1861-2003/Jul
File 95:TEME-Technology & Management 1989-2003/Jul W3
Set Items Description
S1 11557 MINIMALLY() INVASIVE(3N) (SURGERY OR SURGICAL OR SURGERIES)
S2 3867975 CORONARY OR CARDIAC OR CARDIOVASCULAR OR HEART
S3 4562250 VASCULAR OR ANEURYSM? OR VEIN? ? OR VENOUS OR ARTERY OR AR-
TERIES OR ARTERIAL OR ARTERIO?
S4 1004148 HYPOTHERMI? OR COOL??? OR CRYO?
S5 336600 CATHETER?
S6 768071 HYPOTHERMI? OR COOL???

S7 301 CRYOANESTHESIA
S8 42 S1 AND S2:S3 AND S6:S7
S9 2034 S1(5N)S2:S3
S10 34 S8 AND S9
S11 18 RD (unique items)
S12 0 S11/2003
S13 0 S11/2002
S14 18 Sort S11/ALL/PY,D

14/6/1 (Item 1 from file: 5)
12575520 BIOSIS NO.: 200000329022
Inflatable manipulator for organ positioning during surgery and method of
use.
2000

14/6/7 (Item 7 from file: 5)
11997716 BIOSIS NO.: 199900278235
Evolving strategies in cardiac surgery: A word of caution.
1999

14/6/8 (Item 8 from file: 5)
11981087 BIOSIS NO.: 199900234400
Myocardial hypothermia : A potential therapeutic technique for acute
regional myocardial ischemia.
1999

14/6/13 (Item 13 from file: 5)
11335984 BIOSIS NO.: 199800117316
Minimally invasive cardiac surgical techniques in the closure of
ventricular septal defect: An alternative approach.
1998

14/7,K/3 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE
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Serial 10/057334

August 7, 2003

10851402 EMBASE No: 2000332686

Minimally invasive heart surgery - Principles, standards and trends

MINIMAL-INVASIVE HERZCHIRURGIE: PRINZIPIEN - STANDARDS - TRENDS

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Kardiotechnik (KARDIOTECHNIK) (Germany) 2000, 9/3 (71-76)

CODEN: KARDF ISSN: 0941-2670

DOCUMENT TYPE: Journal; Short Survey

LANGUAGE: GERMAN SUMMARY LANGUAGE: ENGLISH; GERMAN

In **minimally invasive cardiac surgery** as well as in other surgical disciplines reduction of perioperative morbidity is the main target of all efforts. Two principle strategies in this field are found at present: - avoidance of extracorporeal circulation (ECC) with all related negative side-effects (off-pump surgery) - avoidance of complete median sternotomy with reduction of approach size. Off-pump procedures via a small or minimalized approach represent therefore the ideal minimally invasive concept but can only be realized in the minority of cases. Majority of **cardiac** surgeons agree that '... surgical invasiveness depends on the severity of postoperative physiologic derangement and its effect on recovery' (Westaby and Benetti, 1996) and therefore avoidance of ECC in this context is the most important criterion. Conventional **coronary**, valve and congenital surgery with ECC are both safe and effective. A large number of so-called minimally invasive or less invasive procedures have been developed but '... the fact that an operation is new and can be performed does not automatically confer benefit' (Silvermann, 1995). New 'minimally invasive' **cardiac** procedures have to demonstrate at least an analogue perioperative morbidity/mortality as well as a comparable mid- and long-time follow-up. Even for surgeons who are working in this field it is difficult to follow all recently made technical and surgical developments. This paper makes an attempt to give a brief overview on the 'minimally invasive' methods used recently in clinical practice. But shortly it will be outdated. The authors believe that minimally invasive or less invasive procedures will achieve comparable results in many fields of conventional **cardiac** surgery and therefore substantially enlarge the surgical repertoire. But at the end '... the goal should be to fit the operation to the patient, and not the patient to the operation' (Cooley , 1997).

MEDICAL DESCRIPTORS:

* **minimally invasive surgery** ; * **heart surgery**

SECTION HEADINGS:

009 Surgery

018 Cardiovascular Diseases and **Cardiovascular Surgery**

14/7,K/4 (Item 4 from file: 73)

DIALOG(R) File 73:EMBASE

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10845953 EMBASE No: 2000326735

No incision is even better than minimal incision cardiac surgery for atrial septal defects (multiple letters)

Cheng T.O.; Matsuzaki K.

Dr. T.O. Cheng, Division of Cardiology, Department of Medicine, George Washington University, Washington, DC United States

Journal of Cardiology (J. CARDIOL.) (Japan) 2000, 36/2 (141-142)

CODEN: JOCAE ISSN: 0914-5087

DOCUMENT TYPE: Journal; Letter

LANGUAGE: ENGLISH

MEDICAL DESCRIPTORS:

* heart atrium septum defect--surgery--su; * heart surgery incision; minimally invasive surgery ; heart catheterization; hypothermia ; letter

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery

14/7,K/6 (Item 6 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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12223621 BIOSIS NO.: 199900518470

Minimally invasive cardiac surgery : Surgical techniques and anaesthetic management.

AUTHOR: Blanc P(a); Aouifi A(a); Chiari P(a); Bouvier H(a); Jegaden O; Lehot J J(a)

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JOURNAL: Annales Francaises d'Anesthesie et de Reanimation 18 (7):p748-771

Aug., 1999

ISSN: 0750-7658

DOCUMENT TYPE: Literature Review

RECORD TYPE: Abstract

LANGUAGE: French; Non-English

SUMMARY LANGUAGE: English; French

ABSTRACT: Objective: To review current data on **minimally invasive cardiac surgery**. Data sources: Search through the Medline(R) data base of French or English articles. Data extraction: The articles were analysed to make a synthesis of the various techniques with their main indications and contra-indications. Data synthesis: **Minimally invasive cardiac surgery** includes various surgical procedures. The usual techniques are described, their major benefits and drawbacks are discussed. The main goals of anaesthetic management are preservation of ventricular function and systemic perfusion, detection and treatment of myocardial ischaemia, prevention of **hypothermia** in case of **coronary artery** bypass grafting on the beating **heart** via sternotomy, intermittent selective ventilation of the collapsed lung using CPAP in case of limited thoracotomy. Expertise in transoesophageal echocardiography is essential for insertion and checking the accurate positionning of the various catheters of the endovascular CPB Heartport(R) system (pulmonary vent, endosinus catheter, **venous** cannula, endoaortic clamp) allowing **coronary artery** bypass grafting and mitral valve surgery through limited thoracotomy and finally, detection of retained intracardiac air and assessment of complete clearing of **cardiac** cavities after mitral valve surgery through limited thoracotomy and aortic valve surgery via ministernotomy. Short-acting anaesthetic agents allow rapid recovery from anaesthesia, early extubation and discharge to the surgical ward within 24 h, whereas overall time spent in the operating room is often longer than with conventional **cardiac** surgery.

DESCRIPTORS:

...MAJOR CONCEPTS: **Cardiovascular Medicine** (Human Medicine, Medical Sciences

...DISEASES: **heart disease, treatment, vascular disease, prevention**

...METHODS & EQUIPMENT: **coronary artery bypass grafting...**

...beating heart , surgical method...
...endoaortic clamp, endosinus catheter, venous cannula, pulmonary vent,
medical equipment...
... minimally invasive cardiac surgery --
MISCELLANEOUS TERMS: ... hypothermia --

14/7,K/9 (Item 9 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
(c) 2003 BIOSIS. All rts. reserv.
11964939 BIOSIS NO.: 199900218252
Ultra-fast track hospital discharge using conventional cardiac surgical techniques.
AUTHOR: Walji Salim(a); Peterson Richard J; Neis Pat; DuBroff Robert; Gray William A; Benge William
AUTHOR ADDRESS: (a)1101 Medical Arts Ave NE, Albuquerque, NM, 87102**Mexico
JOURNAL: Annals of Thoracic Surgery 67 (2):p363-370 Feb., 1999
ISSN: 0003-4975
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English
ABSTRACT: Background. Recent introduction of **minimally invasive** adult **cardiac** surgical techniques has emphasized the advantage of early hospital discharge. However, we chose an alternative approach to determine the safety, efficacy, and feasibility of ultra-fast track protocols while retaining both standard surgical exposure (median sternotomy) and conventional **cardiac** surgical techniques (**hypothermia** , cardiopulmonary bypass with **cardiac** arrest, and optimal myocardial protection). Methods. From September 1995 to January 1998, a total of 258 consecutive patients underwent **cardiac** procedures by a single surgeon. Acceleration of clinical pathways was used to initiate earlier discharges. Stringent postdischarge follow-up was implemented. Prospectively entered data were then analyzed retrospectively. Results. A variety of isolated as well as combined **coronary** and valve procedures were performed. Of the 258 patients operated on during this entire study period, a total of 144 patients (56%) were discharged within postoperative days 1 to 4 (ultra-fast track discharge). Over the past 12 months, this incidence increased to 70% (76 of 108 patients). Approximately 50% of these patients were operated on urgently or emergently. To date, there have been no deaths in this ultra-fast track group. There were eight brief readmissions, of which one was for rewiring of a noninfected sternal dehiscence, and the remaining were for **cardiac** diagnostic studies or a non- **cardiac** problem altogether. Conclusions. Conventional **cardiac** operation can allow ultrafast hospital discharges while retaining the advantage of time-tested techniques and providing wider application without requiring new or additional training or equipment.
MAJOR CONCEPTS: **Cardiovascular** Medicine (Human Medicine, Medical Sciences...
...METHODS & EQUIPMENT: open heart surgery...
... minimally invasive , surgical method, therapeutic method

14/7,K/10 (Item 10 from file: 73)
DIALOG(R)File 73:EMBASE
(c) 2003 Elsevier Science B.V. All rts. reserv.
07795236 EMBASE No: 1999277102

Country of Publication: United States

Language: English

Background. Minimally invasive cardiac surgical techniques recently have been applied in the management of a variety of intracardiac lesions. Methods. Fourteen patients (6 boys and 8 girls; age, 8.9 +- 5.5 years; body weight, 29.0 +- 13.5 kg) were operated on using minimally invasive cardiac surgical techniques for the closure of a ventricular septal defect (subarterial in 11 patients and perimembranous in 3 patients). The operations were performed through a left anterior minithoracotomy and were guided by video-assisted endoscopic techniques under femorofemoral cardiopulmonary bypass. The myocardium was protected by continuous coronary perfusion with hypothermic fibrillatory arrest. The right ventricular outflow tract was entered after pericardiotomy was performed. Results. Closure of the defect (directly in 4 patients and by patch in 10 patients) was performed successfully in all patients. A right ventricular outflow tract obstruction and ruptured sinus of Valsalva aneurysm also were repaired in 1 patient each. The duration of cardiopulmonary bypass was 41 +- 10 minutes (range, 28 to 100 minutes) and the total operative time was 2.2 +- 0.8 hours (range, 1.3 to 3.5 hours). All the patients recovered rapidly from their operation and had an uneventful postoperative course. Follow-up (mean, 6.2 months; range, 6 to 9 months) was complete in all patients. There were no late deaths. Transthoracic echocardiographic examination showed no residual shunt and no aortic regurgitation in all patients. Conclusions. Our experience demonstrates that minimally invasive cardiac surgical techniques are technically feasible and an alternative option for the repair of a ventricular septal defect.

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Broad Descriptors: Human; Cardiovascular disease; Heart disease; Intracardiac defect; Congenital disease; Malformation; Homme; Appareil circulatoire pathologie; Cardiopathie; Communication intracardiaque; Maladie congenitale...

14/7,K/12 (Item 12 from file: 5)

DIALOG(R) File 5:Biosis Previews(R)

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11533824 BIOSIS NO.: 199800315156

Hypothermic, closed circuit pericardioperfusion: A potential cardioprotective technique in acute regional ischemia.

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AUTHOR ADDRESS: (a)Heart Inst., Good Samaritan Hosp., 1225 Wilshire Blvd., Los Angeles, CA 90017**USA

JOURNAL: Journal of the American College of Cardiology 31 (7):p1667-1671 June, 1998

ISSN: 0735-1097

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: Objectives. This study sought to determine whether infarct size can be reduced by hypothermic pericardioperfusion. Background. We have shown that myocardial infarct size can be reduced by topical cooling of the heart. The present study tests whether myocardial cooling and protection can be produced by hypothermic pericardioperfusion using a catheter. Methods. The catheter was sutured into the pericardial space of anesthetized rabbits. Beginning 30 min before coronary artery occlusion, the space was perfused with either chilled (n = 10) or body

temperature ($n = 10$) fluid. The artery was occluded for 30 min and reperfused for 3 h. Results. After 30 min of pericardioperfusion, myocardial temperature was reduced to 34.1 ± 0.9 degree C in chilled hearts compared with 38.9 ± 0.4 degree C in control hearts, $p < 0.001$, a reduction in myocardial temperature of -5 degree C. Risk areas were similar in both groups ($32 \pm 4\%$ left ventricle in cooled and $31 \pm 3\%$ in control hearts, $p = NS$). However, infarct size in cooled hearts was significantly reduced by 49% ($18 \pm 3\%$ of risk area vs. $35 \pm 6\%$, $p = 0.025$). Tamponade did not develop, and there were no significant differences in heart rate, arterial pressure or body temperature between groups. Conclusions. A significant reduction in myocardial temperature, without the development of cardiac tamponade, can be attained using a pericardial catheter to cool the pericardial space. This reduction in temperature causes a significant reduction in necrotic damage. This technique might be used to cool and protect the heart as an adjunct to thrombolysis or during minimally invasive cardiac surgery.

DESCRIPTORS:

MAJOR CONCEPTS: Cardiovascular System (Transport and Circulation...)

...DISEASES: heart disease, treatment...

... heart disease, vascular disease, treatment

METHODS & EQUIPMENT: hypothermic closed circuit pericardioperfusion...

14/7,K/14 (Item 14 from file: 73)

DIALOG(R)File 73:EMBASE

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07359743 EMBASE No: 1998260436

Minimally invasive technique for closure of atrial septal defect

Van So J.A.M.; Diegeler A.; Sim E.K.W.; Autschbach R.; Mohr F.W.

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Asian Cardiovascular and Thoracic Annals (ASIAN CARDIOVASC. THORAC. ANN.) (Singapore) 1998, 6/2 (88-90)

CODEN: ACTAF ISSN: 0218-4923

DOCUMENT TYPE: Journal; Article

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 9

Minimally invasive techniques for repair of extracardiac anomalies in congenital heart disease have evolved over the last 5 years and laid the foundation for the next phase: the repair of intracardiac defects. Fifteen patients (9 females and 6 males) with a median age of 9.8 years (range, 5.2 to 54 years) underwent closure of a secundum atrial septal defect through a small right anterior thoracotomy. The right external iliac artery was cannulated through a small groin incision and the atrial septal defect was repaired during hypothermic fibrillatory arrest for a mean period of 14 ± 5 minutes. The mean length of the thoracotomy was 4.9 ± 0.8 cm (range, 4.5 to 8.8 cm) while the mean length of the groin incision was 3.9 ± 0.5 cm (range, 2.9 to 5.3 cm). In the 3 youngest patients, the external iliac artery was cannulated with an 8F arterial cannula. Direct closure of the atrial septal defect was possible in all patients. The mean operative time was 109 ± 39 minutes. There was no perioperative or late mortality and no morbidity except for a tear in the right femoral artery of a 19-year-old girl. No residual atrial septal defect was observed in any of the patients. Although minimally invasive techniques for repair of intracardiac defects are not fully developed with regard to indications, the procedure described here provided secure closure of the defects with

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excellent cosmetic results.

MEDICAL DESCRIPTORS:

* minimally invasive surgery ; * heart atrium septum defect
--congenital disorder--cn; * heart atrium septum defect--surgery--su; *
thoracotomy

iliac artery ; artery catheterization; induced hypothermia ; operation
duration; surgical technique; human; male; female; clinical article;
clinical trial; adolescent; child; adult; article

SECTION HEADINGS:

018 Cardiovascular Diseases and Cardiovascular Surgery

14/7,K/15 (Item 15 from file: 73)

DIALOG(R) File 73:EMBASE

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07230971 EMBASE No: 1998075077

Minimally invasive cardiac surgical techniques in the closure of ventricular septal defect: An alternative approach

Pyng Jing Lin; Chang C.-H.; Chu J.-J.; Liu H.-P.; Tsai F.-C.; Su W.-J.; Yang M.-W.; Tan P.P.C.; Hammon J.W. Jr.

Dr. P.J. Lin, Children's Hospital, Chang Gung Memorial Hospital, Chang Gung Medical College, 199, Tun-Hwa North Rd, Taipei Taiwan

Annals of Thoracic Surgery (ANN. THORAC. SURG.) (United States) 1998, 65/1 (165-170)

CODEN: ATHSA ISSN: 0003-4975

PUBLISHER ITEM IDENTIFIER: S0003497597011090

DOCUMENT TYPE: Journal; Conference Paper

LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

NUMBER OF REFERENCES: 26

Background. Minimally invasive cardiac surgical techniques recently have been applied in the management of a variety of intracardiac lesions. Methods. Fourteen patients (6 boys and 8 girls; age, 8.9 +/- 5.5 years; body weight, 29.0 +/- 13.5 kg) were operated on using minimally invasive cardiac surgical techniques for the closure of a ventricular septal defect (subarterial in 11 patients and perimembranous in 3 patients). The operations were performed through a left anterior minithoracotomy and were guided by video-assisted endoscopic techniques under femorofemoral cardiopulmonary bypass. The myocardium was protected by continuous coronary perfusion with hypothermic fibrillatory arrest. The right ventricular outflow tract was entered after pericardiotomy was performed. Results. Closure of the defect (directly in 4 patients and by patch in 10 patients) was performed successfully in all patients. A right ventricular outflow tract obstruction and ruptured sinus of Valsalva aneurysm also were repaired in 1 patient each. The duration of cardiopulmonary bypass was 41 +/- 10 minutes (range, 28 to 100 minutes) and the total operative time was 2.2 +/- 0.8 hours (range, 1.3 to 3.5 hours). All the patients recovered rapidly from their operation and had an uneventful postoperative course. Follow-up (mean, 6.2 months; range, 6 to 9 months) was complete in all patients. There were no late deaths. Transthoracic echocardiographic examination showed no residual shunt and no aortic regurgitation in all patients. Conclusions. Our experience demonstrates that minimally invasive cardiac surgical techniques are technically feasible and an alternative option for the repair of a ventricular septal defect.

MEDICAL DESCRIPTORS:

* heart ventricle septum defect--diagnosis--di; * heart ventricle septum defect--surgery--su; *cardiopulmonary bypass; *aorta valve regurgitation

*2 duplicate
8/14/7K//
pages 44-45*

Serial 10/057334

August 7, 2003

... heart valve prosthesis...
... heart surgery
... BROADER DESCRIPTORS: heart disease...
... cardiovascular disease...
... heart septal defect...
... congenital heart disease...
... cardiovascular surgery

14/7,K/17 (Item 17 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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11237963 BIOSIS NO.: 199800019295

Closed circuit, hypothermic, pericardioperfusion: A potential cardioprotective technique for minimally invasive cardiac surgery

AUTHOR: Dave Ravi H(a); Hale Sharon L; Kloner Robert A

AUTHOR ADDRESS: (a)Univ. Southern Calif., Los Angeles, CA**USA

JOURNAL: Circulation 96 (8 SUPPL.):pI742 10/21/97, 1997

CONFERENCE/MEETING: 70th Scientific Sessions of the American Heart Association Orlando, Florida, USA November 9-12, 1997

ISSN: 0009-7322

RECORD TYPE: Citation

LANGUAGE: English

DESCRIPTORS:

MAJOR CONCEPTS: Cardiovascular System (Transport and Circulation...)

ORGANISMS: PARTS ETC: heart --

METHODS & EQUIPMENT: minimally invasive cardiac surgery --

14/7,K/18 (Item 18 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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03939848 JICST ACCESSION NUMBER: 98A0954235 FILE SEGMENT: JICST-E

Minimally Invasive Cardiac Surgery .

KONISHI YUTAKA (1)

(1) Nissekiwakayamairyosenta

Nippon Sekijujisha Wakayama Iryo Senta Igaku Zasshi (Medical Journal of Japanese Red Cross Society Wakayama Medical Center), 1997, VOL.15, PAGE.3-9, FIG.3, TBL.1, REF.33

JOURNAL NUMBER: G0717BBJ ISSN NO: 1341-9927

UNIVERSAL DECIMAL CLASSIFICATION: 616.12-089

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Commentary

MEDIA TYPE: Printed Publication

ABSTRACT: Modern **cardiac** surgery is based on cardiopulmonary bypass, myocardial protection, and median sternotomy. Cardiopulmonary bypass enables **cardiac** operations on a perfectly still and bloodless surgical field, and provides freedom to manipulate the **heart** liberally to expose target sites. The median sternotomy incision provides good exposure and simultaneous access to all **cardiac** valves and **coronary arteries**. However, the morbidity and mortality of **cardiac** surgery is largely attributed to the use of cardiopulmonary bypass, **cardiac** arrest, **hypothermia** and median sternotomy. Over past 2 years, the concepts of less invasive surgery have dramatically affected adult **cardiac** surgery, especially **coronary** bypass grafting. Thus, **minimally invasive coronary artery bypass surgery** (MIDCAB) grafting, defined as a grafting operation performed

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through smaller and less painful incision without use of cardiopulmonary bypass, rapidly gaining acceptance in worldwide younger surgeons. In this article, current status of **minimally invasive cardiac surgery** including MIDCAB is reviewed and some problems of this techniques are discussed. (author abst.)

DESCRIPTORS: **coronary artery bypass...**

...BROADER DESCRIPTORS: **vascular surgery...**

... **cardiovascular surgery...**

... **heart surgery**

File 98:General Sci Abs/Full-Text 1984-2003/Jun
File 9:Business & Industry(R) Jul/1994-2003/Aug 05
File 16:Gale Group PROMT(R) 1990-2003/Aug 07
File 160:Gale Group PROMT(R) 1972-1989
File 148:Gale Group Trade & Industry DB 1976-2003/Aug 07
File 621:Gale Group New Prod.Annou.(R) 1985-2003/Aug 07
File 149:TGG Health&Wellness DB(SM) 1976-2003/Jul W3
File 636:Gale Group Newsletter DB(TM) 1987-2003/Aug 07
File 441:ESPICOM Pharm&Med DEVICE NEWS 2003/Aug W1
File 20:Dialog Global Reporter 1997-2003/Aug 07
File 444:New England Journal of Med. 1985-2003/Aug W2
Set Items Description
S1 713147 HYPOTHERMI? OR COOL??? OR CRYOANESTHESIA
S2 13051 MINIMALLY() INVASIVE(3N) (SURGERY OR SURGERIES OR SURGICAL)
S3 1342534 CORONARY OR CARDIAC OR CARDIOVASCULAR OR HEART
S4 217716 VASCULAR OR ANEURYSM? OR VEIN? ? OR VENOUS
S5 147433 ARTERY OR ARTERIES OR ARTERIAL OR ARTERIO?
S6 66421 CATHETER?
S7 2634 S2(5N)S3:S5
S8 3 S1(S)S7
S9 3 RD (unique items)
S10 199 S1(5N)S6(10N)S3:S5
S11 143114 S3:S5/TI
S12 143114 S3/TI OR S4/TI OR S5/TI
S13 106 S10 AND S11
S14 3166 S3:S5(10N)S2
S15 3 S10 AND S14
S16 3 S15 NOT S8

9/6/2 (Item 1 from file: 20)

21990918

Nellcor Announces New WarmTouch(R) CareDrape(TM) Cardiac Blanket

March 29, 2002

WORD COUNT: 540

9/7/1 (Item 1 from file: 149)

DIALOG(R) File 149:TGG Health&Wellness DB(SM)

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01779158 SUPPLIER NUMBER: 20881354 (THIS IS THE FULL TEXT)

Minimally invasive incision vs. sternotomy for valve repair. (heart valve replacement surgery) (Tips from Other Journals)

Sadovsky, Richard

American Family Physician, v57, n11, p2838(1)

June, 1998

TEXT:

Median sternotomy, cardiopulmonary bypass and various degrees of systemic hypothermia are used in classic surgery to repair or replace cardiac valves. Minimally invasive, or "key hole", surgery has recently been used to minimize surgical trauma and shorten the hospital stay and rehabilitation period. Cohn and associates compared the quality of valve replacement and repair through a minimally invasive incision with that of standard median sternotomy.

Patients with concomitant major coronary artery disease were excluded from the analysis. Forty-one patients who underwent aortic valve surgery and 43 patients who underwent mitral valve surgery through minimally invasive incisions were studied prospectively. In addition, the authors

compared cost, length of hospital stay and need for rehabilitation services after hospital discharge in the first 50 patients who had undergone minimal procedures with those same parameters in 50 patients who had undergone standard valve replacement through a median sternotomy.

The surgical mortality was 5 percent (two of 41 patients) for aortic valve surgery and zero for mitral valve surgery. The two deaths occurred in class IV patients (one death was associated with liver failure and one with arrhythmia). No infections of the thoracic incision developed. One patient required conversion to sternotomy after aortic valve replacement because of a coronary sinus injury related to use of a catheter. There was one postoperative death. Other significant morbidity included one transient ischemic attack and one cerebrovascular accident.

Patients improved by at least two functional classes in the New York Heart Association classification. Less pain, less pain medication and a significantly faster return to normal activity were documented in the patients who had minimally invasive incisions, compared with patients who had undergone similar procedures with median sternotomy.

The authors note that a disadvantage of the minimally invasive approach is the need to use the femoral area for cannulation and perfusion in many patients. The authors note that retrograde dissection may occur. Thus, the thoracic aorta is monitored for severe atherosclerotic changes before using the technique. The rate of groin complications was 8 percent (seven of 84 patients); three had superficial infections, and four required intraoperative arterial reconstruction.

The authors conclude that the quality of cardiac valve surgery with a minimally invasive incision appears to be equal to that of the sternotomy approach. A minimally invasive incision, however, may not be as useful in extremely ill patients with a high degree of risk and potential morbidity. The minimally invasive approach requires longer ischemia and bypass times.

Cohn LH, et al. Minimally invasive cardiac valve surgery improves patient satisfaction while reducing costs of cardiac valve replacement and repair. Ann Surg October 1997;226:421-8.

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9/3,K/3 (Item 2 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
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04087509

PR Newswire California Summary, Thursday, Jan. 21 up to 2:00 P.M. PT

PR NEWSWIRE

January 21, 1999

JOURNAL CODE: WPRW LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 1335

...bc-CA-CTSI-New-Products (CUPERTINO) CTS Launches 10 New Products to Advance Adoption of **Minimally Invasive Cardiac Surgery** SFTH003
01/21/1999 08:02 r f bc-CA-Providian-earnings (SAN FRANCISCO) Providian...
1999 12:28 r n bc-CA-UAW-UC-no-agree (BERKELEY) Forty-Five Day Cooling Off Period For UAW And University Of California Ends - No Agreement Reached SFTH044 01/21...

16/3,AB,K/1 (Item 1 from file: 149)
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01766446 SUPPLIER NUMBER: 20595641 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Minimally invasive cardiac valve surgery .(Advances in Cardiac and Pulmonary Surgery)